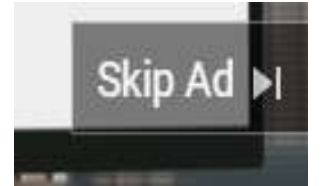


2026 ARMS 2 – Training Videos

- Please click [here](#) to access the list of videos. Corresponding slides are found when you scroll down here.
- Once you start a video, if an advertisement appears, please wait a few seconds and click “Skip Ad” to proceed to the video.



Topic	Length (minutes)
1. Introduction and Purpose	18
2. Getting Started	9
3. Face Page, Insert Sheet, Sec. A	9
4. Sec. B – Field Characteristics	5
5. Sec. C – Fertilizer Applications	17
6. Sec. D – Pesticide Applications	25
7. Sec. E – Pest Management Practices	6
8. Sec. F – Field Operations	36
9. Sec. G – Irrigation	12

2026 ARMS 2 - Presentations

[Introduction and Purpose - 3](#)

[Getting Started - 20](#)

[Face Page, Insert Sheet, Sec. A - 29](#)

[Sec. B – Field Characteristics - 47](#)

[Sec. C – Nutrient or
Fertilizer Applications - 58](#)

[Sec. D – Pesticide Applications - 94](#)

[Sec. E – Pest Management - 122](#)

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ARMS 2

Introduction and Purpose



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What is ARMS?

- Agricultural Resource Management Survey (ARMS) is a project conducted in cooperation with USDA's Economic Research Service (ERS)
- Primary source of information for agricultural resource use, costs, and farm finance
- Supports key uses of enterprise, farm, and household data that correspond with mandated activities required by the U.S. Congress



Basics

- Basic guidance on ARMS 2
- Study the interviewer's manual and other survey materials
- Work with coaches and managers



Motivation for Collecting this Data

Agricultural and Consumer Protection Act of 1973

“The Secretary of Agriculture...shall conduct a cost of production study of the wheat, feed grain, cotton, and dairy commodities under the various production practices and **establish a current national weighted average cost of production**. This study shall be updated annually and shall include all typical variable costs, including interest costs, a return on fixed costs, and a return for management.”

Mandated reporting of this data is part of permanent Farm Bill legislation



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ARMS: Data Collection Phases

- Phase 1 (May – July): Screens list frame operations for in-business status, operating arrangement, and presence of targeted commodities
- Phase 2: (Oct – Dec): Collects data on chemical use, production practices, and variable input costs for targeted commodities
- Phase 3: (January – April): Focuses on farm economics and risk management practices



What is special about ARMS 2?

- Two Versions
 - Production Practices Report (PPR – Short)
 - Production Practices and Cost Report (PPCR – Long)

Targeted commodities change each year



What data are we gathering?

- Provides Reported Data on Nutrient, Fertilizers, and Actual Pesticide Use
 - Crop Treated
 - Acreage Treated
 - Rates and Number of Treatments
 - Identify Alternatives Used



How is the data used?

- Provides ability to conduct economic and environmental analyses relating to:
 - Field crop chemical use
 - Crop production practices
 - Integrated Pest Management (IPM) practices and adoption levels
- There is an increasing demand for this data



Only Source of this Data

- Detailed field-level information
- The information is tied to:
 - production outcomes
 - to commodity costs and returns
 - whole-farm finances
 - farm operator and household attributes
 - program participation and policies
- A large and nationally-representative sample of farms



Effects on agricultural chemicals

- Without ARMS 2 Data:
 - Loss of minor uses of chemicals
- With ARMS 2 Data:
 - Changes in labeling and usage
 - Increased re-entry or pre-harvest intervals
 - Change protective equipment requirements
 - Reduce the use rate or number of sprays



EPA is the Data Primary User

- The Water Quality Initiative
 - Data needed for assessing issues
 - Mandated development of database
- USDA Pesticide Data Program (PDP)
 - NASS & ERS responsibility
 - NASS begins chemical surveys
- Food Quality Protection Act
 - EPA mandated to review tolerance levels
 - NASS provides actual usage data



Who Else Uses This Information?

- National and agricultural media
- Input providers
- Farmers and their advisors
- Policy stakeholders
 - Farm organizations and commodity groups



Policymakers

- Policy decisions will be made with or without ARMS
- Better information makes for better decisions



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Farmers

- Farmers benefit indirectly
 - Extension advisors, magazines, newspaper, radio
 - Farm org., commodity groups, agribusiness
 - Congress, USDA
- Growers chance to tell their story
- Establish facts about chemical use
- Decision-making for product re-registration
- Impact/Consequences of cancellation



How ARMS Phase 2 Data are Disseminated

- ERS reports on policy-relevant topics
 - Amber Waves magazine articles
 - <https://www.ers.usda.gov/amber-waves>
 - Daily ERS Charts of Note
 - <https://www.ers.usda.gov/data-products/charts-of-note>
- Staff analyses for policymakers (not public)
- Data releases on our website
 - ARMS crop production practices
 - Commodity costs and returns
 - NASS Quick Stats (chemical use)



Additional Information

- The Phase 2 Interviewers Manual
- ERS website: www.ers.usda.gov
 - Charts of Note: read and sign up for free distribution
<https://www.ers.usda.gov/data-products/charts-of-note>
- ERS Commodity Costs and Returns Estimates
 - <http://www.ers.usda.gov/data-products/commodity-costs-and-returns.aspx>



Thanks for Watching!



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Getting Started with the Survey



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What Did the Operator Receive?

- Pre-survey postcard
- No questionnaires will be mailed to respondents this year



Introduction

- Introduce Yourself:
 - Practice your introduction to get comfortable
 - Include who you are and whom you represent
- Make sure you understand and can explain the purpose of the survey and why it is important
- Encourage participation
- Remind the respondent that the data are confidential and are used only to make state and national level estimates
- Be prepared to set up an interview time



Explaining the Process

- Get operator to agree to survey
- Explain the major sections (field selection, fertilizer, pesticides, pest management practices)
- Encourage the use of farm records



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Using Interview Time Wisely

- Verify contact information, target crop acres
- Check Screening Survey Information Form
- Work through field selection process
- Collect what you can by phone
 - Only a refusal if they give us nothing
- Determine best way to get spray records



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How Long Should This Take?

- OMB expected time to complete one questionnaire
 - Target crop (PPCR) 65 minutes
- It is vital that the Phase II questionnaires to be completed for these operations
- Data from all phases provide the link between agricultural resource use and farm financial conditions



Data Recording Reminders

- Make all entries clear and easy to read in PENCIL
- Follow Instructions regarding “NO” or “NONE”
 - Most yes/no questions now require 1 = Yes and 3 = No
 - Watch for appropriate Yes/No Check Boxes
 - Enter a dash (–) if the answer to a question is “NONE”
- Don’t Know = DK, Refused = RF



Other Data Recording Reminders

- Read instructions and questions exactly as written
- Follow the Skip Instructions
- Don't forget Start Time and End Time!
- Make notes about answers in the margins
- Notes about unusual situations should be complete
 - Put on Blank Page, Back Page, Comment Sheet, Other Inserts
- Look for pre-printed decimal places
 - Acreage to one place, Chemical application to two places



Thanks for Watching!



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Face Page, ARMS I Acreage Insert Sheet and Section A



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Face Page

- Verify the name and address of the operator and any partners
- Record the starting time of the interview using military time
 - Example: 2:30 pm = 1430
 - Measures respondent burden



Burden Statement

The information you provide will be used for statistical purposes only. Your response will be kept confidential and any person who willfully discloses ANY identifiable information about you or your operation is subject to a jail term, a fine, or both. This survey is conducted in accordance with the Confidential Information Protection and Statistical Efficiency Act of 2018, Title III of Pub. L. No. 115-435, codified in 44 U.S.C. Ch. 35 and other applicable Federal laws. For more information on how we protect your information please visit: <https://www.nass.usda.gov/confidentiality>. Response is voluntary.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB number is 0535-0218. The time required to complete this information collection is estimated to average 65 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.



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Screening

searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.
We encourage you to refer to your farm records during the interview.

BEGINNING TIME
[MILITARY]

H	H	M	M
0	0	0	4

SCREENING BOX

0006	1
------	---

☐ Check if verified POID _____
Name: _____

☐ Check if verified POID _____
Name: _____



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Screening

- Verify if operator is still in business
 - Including CRP
- Verify if target name grew the target crop this year
 - Including all operations
- Out of Business of Landlord only
 - Conclude interview
- Record all acres operated including
 - Cropland in other states
 - Abandoned target crop acres
- Collect data for addition individual ops or partnerships
- Take good notes



ARMS I Acreage Insert Sheet

AGRICULTURAL RESOURCE MANAGEMENT SURVEY FOR *YEAR* SCREENING INFORMATION FORM

STATE	VERSION	ID	TRACT	SUBTRACT
99	77	999999990	01	01
			SAMPLE SEQUENCE NUMBER: 0105	
			OPDOM STATUS: 00	

B. A. FARMER
1234 DIRT RD
ANYWHERE, ST 56789
(987) 654-3210

INFORMATION FROM SCREENING:



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ARMS I Acreage Insert Sheet

INFORMATION FROM SCREENING:

TYPE OF OPERATION REPORTED: PARTNERSHIP WITH 3 PARTNERS
RESPONDENT: OPERATOR OR MANAGER

THIS OPERATION IS SELECTED FOR THE CROP :CROP – PPCR or PPR
THE SCREENING PHASE DATA ARE FROM COMPLETE RESPONSE.
DATA WERE COLLECTED BY ENUMERATOR: 99999

Sources of Data:

Operator
Spouse
Partner
Previously Reported Data

Total Acres Of Land Operated: 1,820.0

Total Acres Of Crop Land: 1,700.0

=====



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ARMS I Acreage Insert Sheet

=====

Total Acres Of CROP Planted For YEAR : 700.0

- Sources of Data:**
- Operator
 - Spouse
 - Partner
 - Previously Reported Data

PLEASE WRITE A NOTE TO EXPLAIN IF DATA REPORTED IN SECTION A
(FIELD SELECTION SECTION), ITEM 1 FOR TARGET CROP ACRES PLANTED
IS LESS THAN 525.0 OR GREATER THAN 875.0.



ARMS I Acreage Insert Sheet

THIS OPERATION IS SELECTED FOR THE TARGET CROP – PPCR or PPR
THE SCREENING PHASE DATA ARE FROM 7 RESPONSE.
DATA WERE COLLECTED BY ENUMERATOR: .

Total Acres Of Land Operated: UNKNOWN

Total Acres Of Crop Land: UNKNOWN

=====

Total Acres Of CROP Planted For YEAR 118.0

PLEASE WRITE A NOTE TO EXPLAIN IF DATA REPORTED IN SECTION A
(FIELD SELECTION SECTION), ITEM 1 FOR TARGET CROP ACRES PLANTED
IS LESS THAN 88.5 OR GREATER THAN 147.5.



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Section A: Field Selection

- Target crop acres planted
 - Compare to ARMS I Acreage Insert Sheet
 - If the acres differ by +/-25%, please leave a note
- Total number of targeted crop fields planted
- Target crop is printed on the label, and each questionnaire will only refer to that particular type of the target crop



Section A: Field Selection

- **Cardinal & Inter-Cardinal Directions**

- Direction will be on the questionnaire label and CAPI
- For each operation, the field has already been randomly selected using the eight cardinal and inter-cardinal directions
- Field selection is irrespective of the location of the homestead on the operation



Section A: Field Selection



01 01 1312 549908 0

SURVEY CODE=4642-9008 18XX

STR 70 420

East

20 13 #1

19901345 4500 1000191 15600 1

DATE 12/12

0 40416

20471 20171 472

190104, SL 5448-5506

Furthest target crop field
in the given direction

Northern-most target crop field

Southern-most target crop field

Eastern-most target crop field

Western-most target crop field

Northeastern-most target crop field

Southeastern-most target crop field

Northwestern-most target crop field

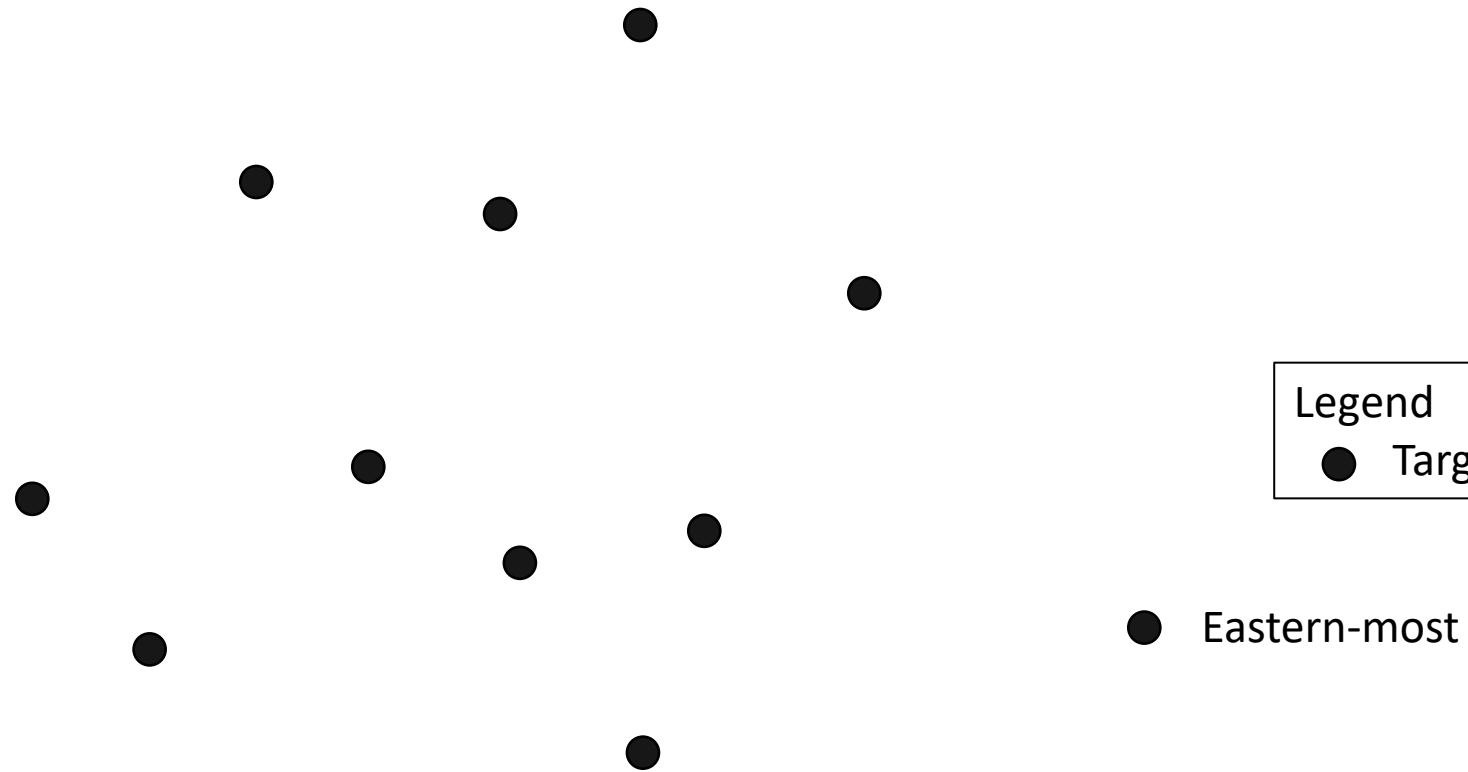
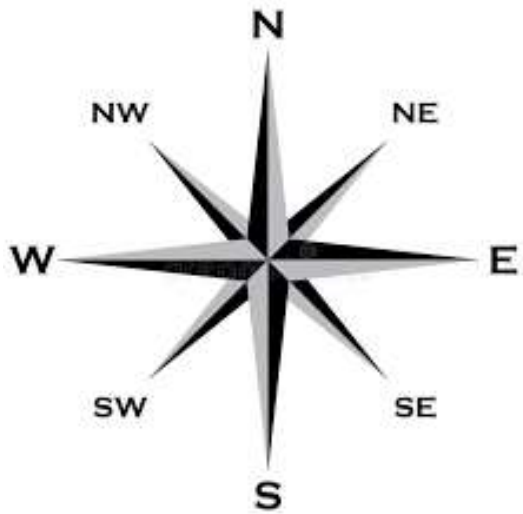
Southwestern-most target crop field



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Section A: Field Selection



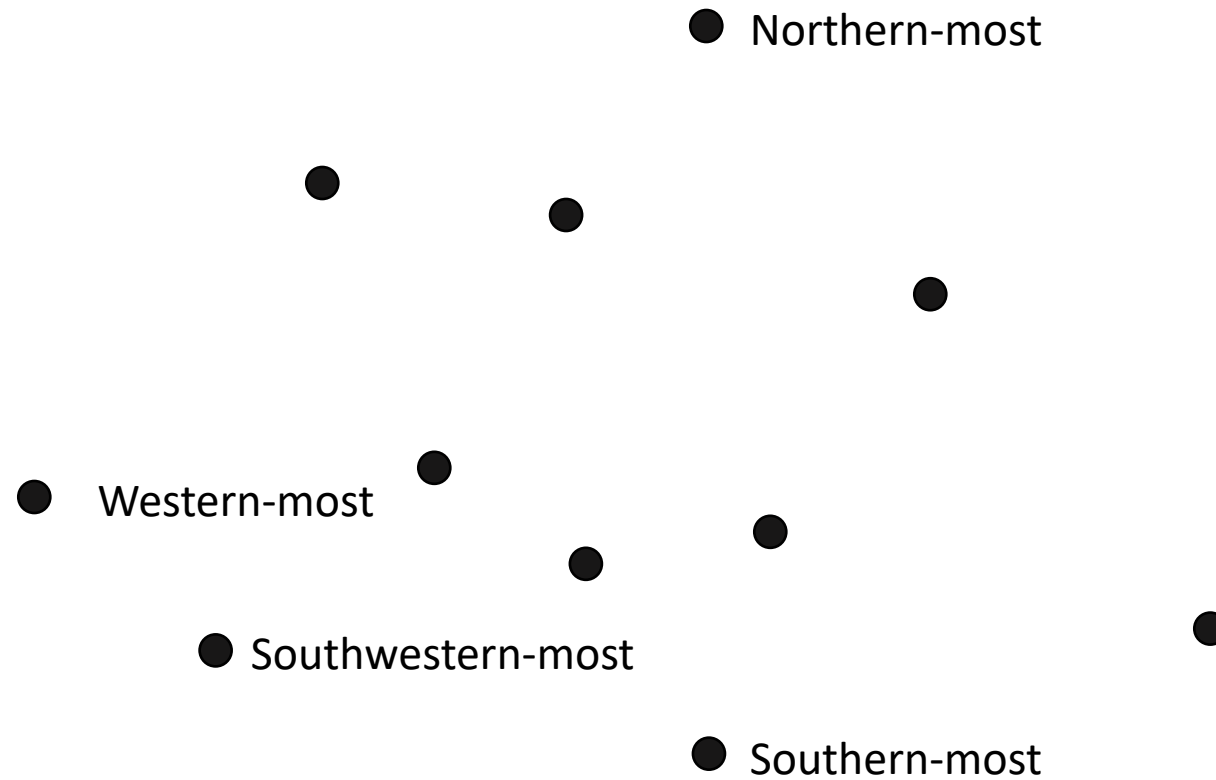
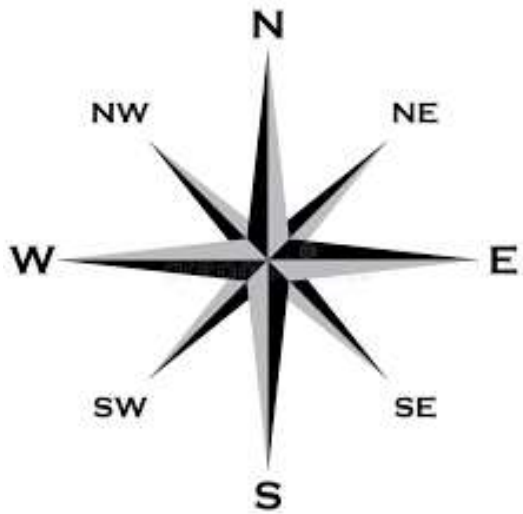
Legend
● Targeted Crop Field

● Eastern-most



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Section A: Field Selection



Legend

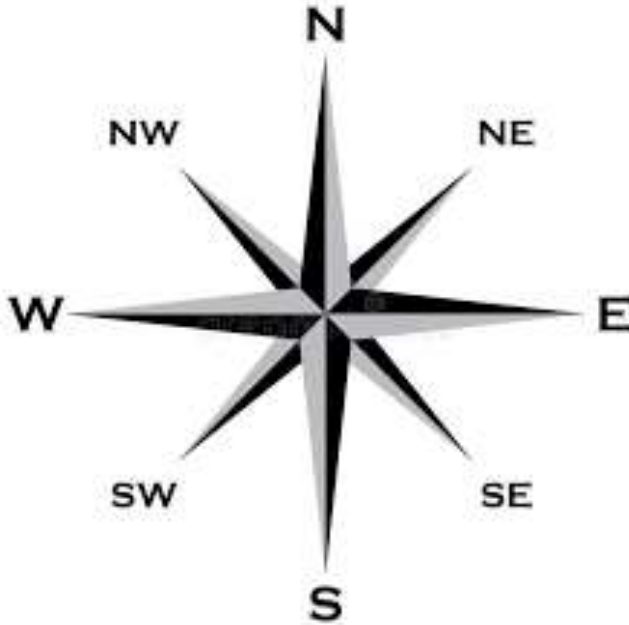
● Targeted Crop Field



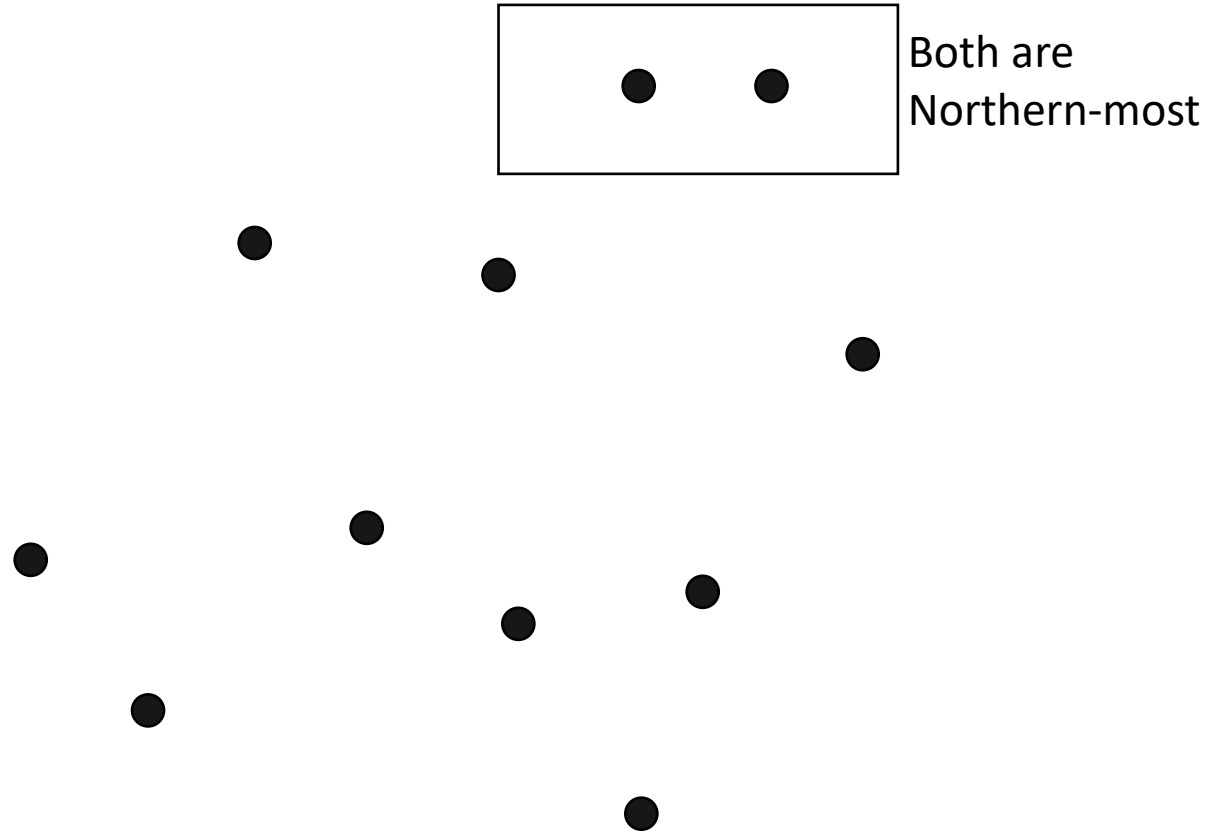
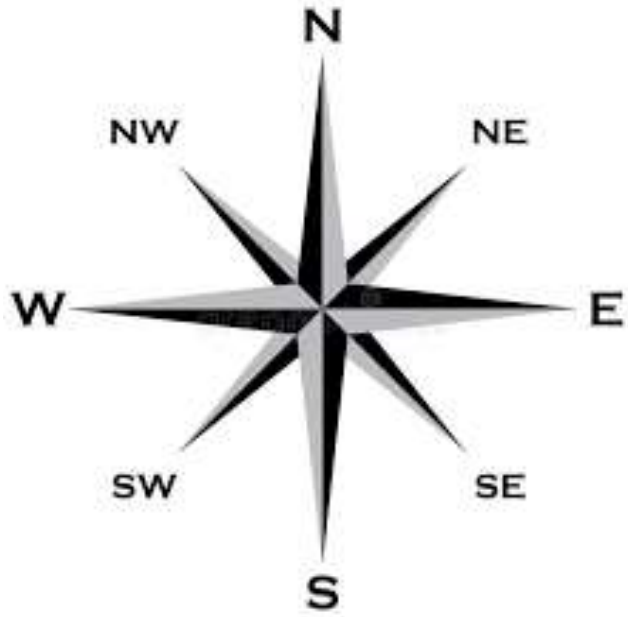
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Section A: Field Selection

- Northern-most field?
 - no
- Northeastern-most field?
 - no
- Eastern-most field?
 - yes
 - Select field



Section A: Field Selection



Legend

● Targeted Crop Field



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Quiz time!



17 816058020 01 01 1832 598180 0

?

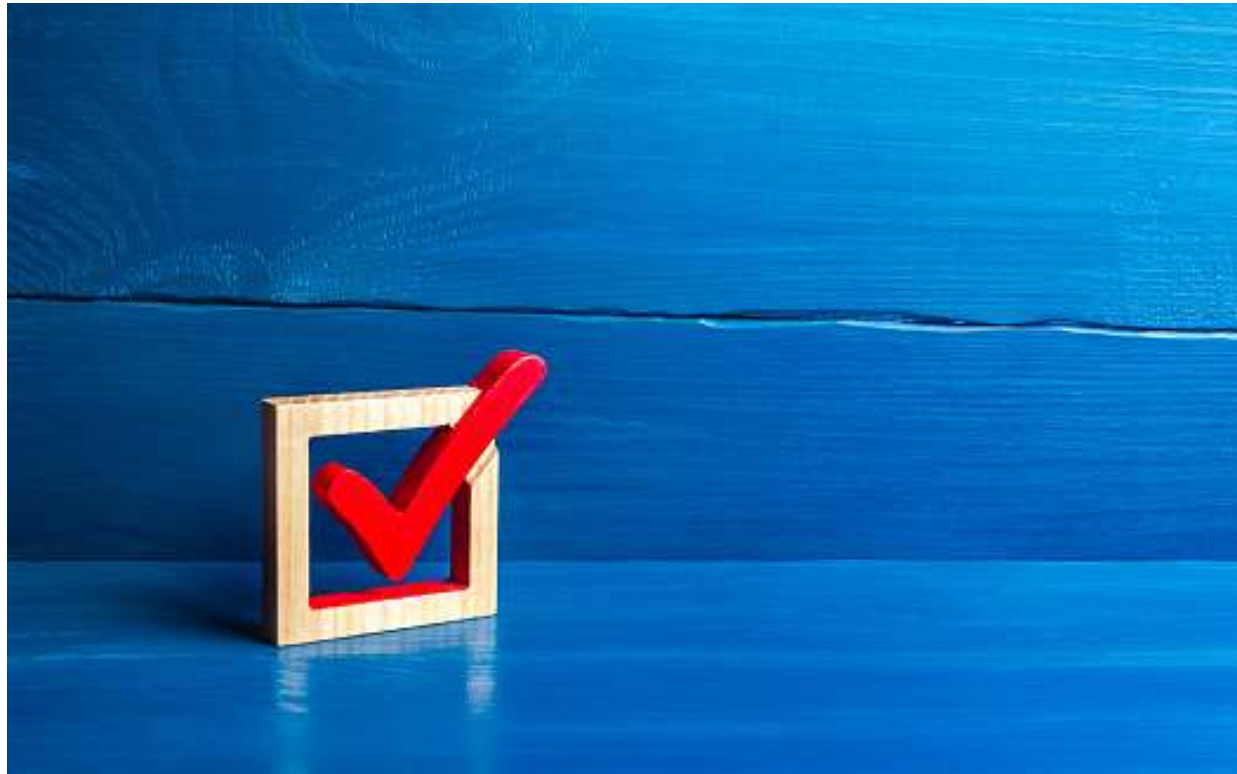
STR 70 420
20 13 #1



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Section A: Field Selection



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Section B

Field Characteristics

only in PPCR (long version)



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The Purpose of Section B

- To obtain information used to calculate the production cost per acre
- To study conservation practices, land tenure, and the adoption of new technologies
- The estimation of residue levels and determination of tillage systems that are used to evaluate water quality and soil erosion



Question 1: Selected Field

Section B and the rest of the questionnaire only refer to the selected field.

B

FIELD CHARACTERISTICS - SELECTED FIELD

B

1. How many acres of corn did this operation plant in the selected field for the 2026 crop?.....

Acres

1301



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Question 7: Planting Date

7. On what date was the selected field planted?.....

M	M	D	D
1308			
____ 2026			

- If they don't know the planting date:
 - Ask what week the field was planted
 - Use the Wednesday of that week



Question 7a: Yield Goal

- Yield goal for corn can be reported in pounds, cwt, tons, or bushels per acre.

	Units per Acre	Unit Code 1 Pounds 2 CWT 3 Tons 4 Bushels
a. What was your yield goal at planting for the selected field?.....	0216 .	0217



Question 7a: Yield Goal

- Yield goal for rice can be reported in pounds, cwt, tons, bushels, or barrels per acre.

a. What was your yield goal at planting for the selected field?
INCLUDE any ratoon crop.....

Units per Acre		Unit Code
0216		1 Pounds
		2 CWT
		3 Tons
		4 Bushels
		5 Barrels



Corn - Harvest Questions

17. Has harvest of the selected field been completed?.....

Code

1328

Yes=1
No=3

[Now I need information about the acres harvested or to be harvested and the yields from the selected field.]

18. How many acres in the selected corn field were or will be--

	Acres	1 What yield per acre did you or do you expect to get for corn -- Units per Acre	2 Unit Codes 1 Pounds 2 CWT 3 Tons 4 Bushels
a. harvested for grain, first crop?.....	1346 _____	1347 _____	1348
b. harvested for silage or green chop?.....	1349 _____	1350 _____	Tons
c. harvested for seed?.....	1431 _____	1432 _____	1433
d. abandoned?.....	1351 _____		
e. used for some other purpose?.....	1439 _____		



Rice - Harvest Questions

	Code
15. Has harvest of the selected field been completed?.....	Yes=1 1328 No=3

[Now I need information about the acres harvested or to be harvested and the yields from the selected field.]

16. How many acres in this rice field were or will be--

- a. harvested for grain, first crop?.....
- b. harvested for grain, ratoon crop?.....
- c. harvested for commercial seed contract?.....
- d. abandoned?.....
- e. used for some other purpose?.....

Acres	What yield per acre did you get or do you expect to get for rice--	Unit Code 1 Pounds 2 CWT 3 Tons 4 Bushels 5 Barrels
	Units per Acre	Code
1346	1347	1348
1332	1333	1334
1431	1432	1433
1351		
1439		



Crop History Table

25. Please report the history of crops on the majority of the selected field, including cover crops.

1 What crops were planted on the selected field in-- [For perennial crops (1, 11, 292, 302, and 311), report the crop code in all seasons when the crop was growing.]			2 Was this a cover crop? Yes=1 No=3	3 If a cover crop was planted, what was the final method used to terminate this cover crop? 1 Tilled-in 2 Herbicide 3 Rolled 4 Grazed 5 Harvested for forage 6 Harvested for grain 7 Winter killed	4 What type of tillage ¹⁷ was used? 1 No tillage 2 Strip tillage 3 Reduced tillage 4 Conventional tillage
Season and Year	Crop Name	Crop Code		Code	Code
a. Spring/Summer of 2026?...	Corn	6			4112 4
b. Fall of 2025?.....	W. Wheat	1343 165	1470 1	1471 1	4113 4
c. Spring/Summer of 2025?...	Cotton	1369 283	1472 3	1473	4114 4
d. Fall of 2024?.....	None	1372 318	1474	1475	4115
e. Spring/Summer of 2024?...	Corn	1375 6	1476 3	1477	4116 4
f. Fall of 2023?.....		1378	1478	1479	4117
g. Spring/Summer of 2023?...		1381	1480	1481	4118
h. Fall of 2022?.....		1366	1482	1483	4119
i. Spring/Summer of 2022?...		1340	1484	1485	4120

Bought
farm
in
2024

Conservation Practice Table

For each of the following conservation practices or plans, indicate if the practice or plan was used on the selected field and any financial assistance associated with the practice or plan.

Conservation Practices or Plans	Was this practice or plan used on the selected field in year?	What financial assistance (cost-share) has been received for this practice on the selected field?
	1 Used in year 2 Not used in year but used in earlier years 3 Never used Code	1 Received a payment in year from EQIP, CSP, or similar program 2 Did not receive a payment in year but have in earlier years 3 Have never received a payment for this practice Code
a. Contour farming	4088 1	4089 1
b. Terraces	4090 2	4091 3
c. Grass waterway	4092 3	4093



That's a Wrap!

Thanks for your attention!



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Sec. C – Nutrient or Fertilizer Applications



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Section Purpose

- Identify nutrients or fertilizer used to produce the commodity of interest on the selected field.
- Fertilizer application data is used to analyze water quality and agricultural productivity issues and policies.
- Nutrient Management practices help farmers adjust fertilizer applications to crop needs and reduce costs and losses to the environment.



Getting Started In Section C

C**NUTRIENT or FERTILIZER APPLICATIONS – SELECTED FIELD****C**

	Code	Office Use Edit Table
1. Were commercial nutrients or fertilizers applied to the selected field for the Current Year crop? INCLUDE those from operators, landlords, and contractors. Yes=1 No=3	0202	0200
[If item 1 = 1 continue. Otherwise go to item 6]		
2. How many commercial nutrient or fertilizer applications were made to the selected field for the crop? INCLUDE applications made by airplanes and custom applicators.....		0203

Code Yes=1 if Applied Fertilizers and No=3
Record the number of applications



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What is Included

INCLUDE

- ☐ Custom applied nutrients or fertilizers
- ☐ Nutrients or fertilizers applied in the fall of Prev Yr and those applied earlier if the selected field was fallow in Prev Yr
- ☐ Commercially prepared manure or compost



What is Excluded

EXCLUDE

- ☐ Micronutrients
- ☐ Unprocessed manure
- ☐ Nutrients or fertilizers applied to previous crops in the selected field
- ☐ Lime and gypsum/landplaster



Nutrient or Fertilizer Applications Table

L I N E	2 Materials Used [Enter percentage analysis or actual pounds of plant nutrients applied per acre.] [Show Common Nutrients or Fertilizers in Respondent Booklet] [Refer to nitrogen list above for type of nitrogen used.]					3 What quantity was applied per acre? [Leave this column blank if actual nutrients were reported]	4 [Enter material code] 1 Pounds 12 Gallons 13 Quarts 19 Pounds of actual nutrients	5 When was this applied? 1 In the fall before seeding 2 In the spring before seeding 3 At seeding 4 After seeding	6 How was this applied? [Refer to code list above]	7 How many acres in the selected field were treated in this application? Acres	8 Was this applied using variable rate technology (VRT)? Yes = 1 No = 3
	N Nitrogen	P ₂ O ₅ Phosphate	K ₂ O Potash	S Sulfur	Source/Form of N Used [Refer to code list above]						
	01	31	32	33	34						
02	31	32	33	34	35	36	37	38	39	40	27
03	31	32	33	34	35	36	37	38	39	40	27



Fertilizer is made up of 2 things:

- **Actual Nutrients**

- N: Nitrogen
- P: Phosphorus
- K: Potassium
- S: Sulfur
- And many others

- **Carrier Material**

- Filler - other stuff



Example Nutrients to grow a crop

- 105 pounds of Nitrogen per acre
- 35 pounds of Phosphorus per acre
- 55 pounds of Potassium per acre



2 Ways to Record Nutrient or Fertilizer Applications:

- Percent Analysis – most common & preferred**

- Pounds of Actual Nutrients**

LINE	2 Materials Used [Enter percentage analysis or actual pounds of plant nutrients applied per acre.] [Show Common Nutrients or Fertilizers in Respondent Booklet] [Refer to nitrogen list above for type of nitrogen used.]					3 What quantity was applied per acre? [Leave this column blank if actual nutrients were reported]	4 [Enter material code] 1 Pounds 12 Gallons 13 Quarts 19 Pounds of actual nutrients	5 When was this applied? 1 In the fall before seeding 2 In the spring before seeding 3 At seeding 4 After seeding	6 How was this applied? [Refer to code list above]	7 How many acres in the selected field were treated in this application? Acres	8 Was this applied using variable rate technology (VRT)? Yes = 1 No = 3
	N Nitrogen	P ₂ O ₅ Phosphate	K ₂ O Potash	S Sulfur	Source/Form of N Used [Refer to code list above]						
	01	31	32	33	34	35	36	37	38	39	40 •__
02	31	32	33	34	35	36	37	38	39	40 •__	27
03	31	32	33	34	35	36	37	38	39	40 •__	27



2 Ways to Record Nutrient or Fertilizer Applications:

- Percent Analysis – most common & preferred

- **A Complete Product**

- Pounds of Actual Nutrients

- **Individual Ingredients Of A Complete Product**



2 Ways to Record Nutrient or Fertilizer Applications:

- **Percent Analysis - A Complete Product**

- Urea 46-0-0
- 10-34-0
- MAP 11-52-0
- DAP 18-46-0

- **Pounds of Actual Nutrients - Individual Ingredients**

- Nitrogen
- Phosphorus
- Potassium
- Sulfur



It is written with numbers and dashes

- 26 - 5 - 10

N - P - K

- First number listed is Nitrogen
- Second number listed is Phosphorus
- Third number listed is Potassium
- If a Fourth number is present: 26 - 5 - 10 - 7 that is Sulfur



Numbers represent the Percentage

- 26-5-10
- For any given quantity of this fertilizer,
 - 26% of it will be Nitrogen
 - 5% of it will be Phosphorus
 - 10% of it will be Potassium
 - The remaining 59% will be carrier material



Percent Analysis Method

- 150 Pounds of 26-5-10:
 - $150 \text{ lbs.} \times 26\% = 39 \text{ pounds Nitrogen}$
 - $150 \text{ lbs.} \times 5\% = 8 \text{ pounds of Phosphorus}$
 - $150 \text{ lbs.} \times 10\% = 15 \text{ pounds of Potassium}$
 - The rest will be carrier material
 - $150 \text{ lbs.} \times 59\% = 88 \text{ pounds of carrier material}$



Peanut M&Ms vs Urea



46%



54%



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Snickers vs DAP



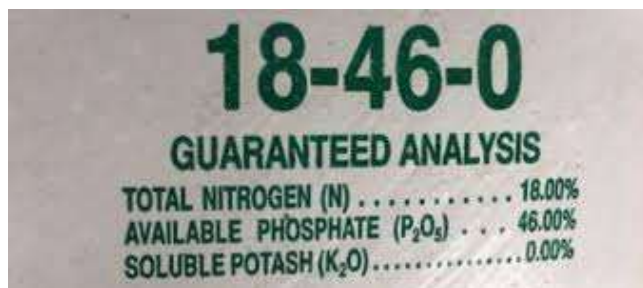
18%



46%



36%



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Sprite vs 10-34-0



10%



34%



56%

10-34-0

Guaranteed Analysis

Total Nitrogen (N).....10%

Available Phosphate (P_2O_5).....34%



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Lemonade vs UAN 32-0-0



32%



68%

32%

UAN SOLUTION



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Percent Analysis

L I N E	2 Materials Used [Enter percentage analysis or actual pounds of plant nutrients applied per acre.] [Show Common Nutrients or Fertilizers in Respondent Booklet] [Refer to nitrogen list above for type of nitrogen used.]					3 What quantity was applied per acre? [Leave this column blank if actual nutrients were reported]	4 [Enter material code] 1 Pounds 12 Gallons [Redacted] nutrients
	N Nitrogen	P ₂ O ₅ Phosphate	K ₂ O Potash	S Sulfur	Type of N Used		
01	31 11	32 52	33	34	35 4	36 85	37 1
02	31 10	32 34	33	34	35 4	36 5	37 12
03	31	32	33 60	34	35	36 120	37 1



Percent Analysis Method

- 10-34-0 11-52-0 18-46-0 28-0-0 46-0-0 82-0-0 0-0-60
- If you add the N-P-K together, it will not be greater than 85
 - If Sulfur is included in the mix, then this does not hold true.



Pounds of Actual Nutrients

L I N E	2					3	4
	Materials Used [Enter percentage analysis or actual pounds of plant nutrients applied per acre.] [Show Common Nutrients or Fertilizers in Respondent Booklet] [Refer to nitrogen list above for type of nitrogen used.]					What quantity was applied per acre? [Leave this column blank if actual nutrients were reported]	[Enter material code] 19 Pounds of actual nutrients
	N Nitrogen	P ₂ O ₅ Phosphate	K ₂ O Potash	S Sulfur	Type of N Used		
01	31 10	32 44	33 72	34	35 4	36	37 19
02	31	32	33	34	35	36	37
03	31	32	33	34	35	36	37



2 Ways to Record Nutrient or Fertilizer Applications:

- **Percent Analysis – most common & preferred**

- 5 gallons of 10-34-0
- 85 pounds of 11-52-0
- 120 pounds of 0-0-60

Complete Product

- **Pounds of Actual Nutrients**

- 10 pounds of Nitrogen
- 44 pounds of Phosphorus
- 72 pounds of Potassium

Ingredients of a Product



2 Ways to Record – Columns 3 & 4

- **Percent Analysis – most common & preferred**

- 5 gallons of 10-34-0
- 85 pounds of 11-52-0
- 120 pounds of 0-0-60
- **Column 3 must be complete**
- **Column 4 must be coded 1 or 12**

- **Pounds of Actual Nutrients**

- 10 pounds of Nitrogen
- 44 pounds of Phosphorus
- 72 pounds of potassium
- **Column 3 must be blank**
- **Column 4 must be coded 19**

3	4
What quantity was applied per acre?	[Enter material code]
[Leave this column blank if actual nutrients were reported]	1 Pounds 12 Gallons 13 Quarts 19 Pounds of actual nutrients
36	37



QUIZ TIME

Here we see an example of 100 pounds of potassium nitrate.
What is the percentage of nitrogen in potassium nitrate?

L I N E	2 Materials Used [Enter percentage analysis or actual pounds of plant nutrients applied per acre.] [Show Common Nutrients or Fertilizers in Respondent Booklet] [Refer to nitrogen code list above for type of nitrogen used.]					3 What quantity was applied per acre? [Leave this column blank if actual nutrients were reported]	4 [Enter material code] 1 Pounds 12 Gallons 13 Quarts 19 Pounds of actual nutrients
	N Nitrogen	P ₂ O ₅ Phosphate	K ₂ O Potash	S Sulfur	Type of N Used		
01	31 13	32 0	33 44	34 0	35 7	36 100	37 1



QUIZ TIME

Here we see an example of 100 pounds of potassium nitrate.
What is the percentage of nitrogen in potassium nitrate?

L I N E	2 Materials Used [Enter percentage analysis or actual pounds of plant nutrients applied per acre.] [Show Common Nutrients or Fertilizers in Respondent Booklet] [Refer to nitrogen code list above for type of nitrogen used.]					3 What quantity was applied per acre? [Leave this column blank if actual nutrients were reported]	4 [Enter material code] 1 Pounds 12 Gallons 13 Quarts 19 Pounds of actual nutrients
	N Nitrogen	P ₂ O ₅ Phosphate	K ₂ O Potash	S Sulfur	Type of N Used		
01	31 13	32 0	33 44	34 0	35 7	36 100	37 1

Answer = 13



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Custom Application and Cost of Fertilizer

4. Were any nutrients or fertilizers applied by custom applicators?..... [If item 4 = 1 continue. Otherwise go to item 5.] a. Are you able to report the cost of nutrient or fertilizer materials and custom application separately?..... [If item 4a = 1 continue. Otherwise go to item 5.] b. Excluding the cost of the nutrient or fertilizer materials, how much was spent for custom application of nutrients or fertilizers on the selected field? INCLUDE • operator, landlord, and contractor costs • costs for sulfur and micronutrients EXCLUDE custom application of lime, gypsum, purchased manure, and purchased compost..... [If material and application costs can't be separated, exclude them here and record the total in item 5.] 5. What was the total cost of all nutrient or fertilizer products applied to the selected field? INCLUDE • operator, landlord, and contractor costs • costs for sulfur and micronutrients • materials applied to the selected field if it was fallow in 2024 EXCLUDE lime, gypsum, purchased manure, and purchased compost..... [If custom applied and the cost of materials can be separated from application costs, include the cost of materials only; otherwise, include both the material and application costs.]	Code Yes=1 No=3 0214 Code Yes=1 No=3 2216 Office Use 0215 Dollars & Cents per Acre 0219 OR Total Dollars 0220 Dollars & Cents per Acre 0221 OR Total Dollars 0222
--	--



Custom Application and Can Separate Costs

4. Were any nutrients or fertilizers applied by custom applicators?.....		Yes=1 No=3	Code 0214	1
[If item 4=1 continue. Otherwise go to item 5.]				
a. Are you able to report the cost of nutrient or fertilizer materials and custom application separately?.....		Yes=1 No=3	Code 2216	1
[If item 4a = 1 continue. Otherwise go to item 5.]				
b. Excluding the cost of the nutrient or fertilizer materials, how much was spent for custom application of nutrients or fertilizers on the selected field?			Office Use 0215	
INCLUDE				
• operator, Custom Charge				
• costs for Custom Charge				
EXCLUDE custom application of lime, gypsum, purchased manure and purchased compost.....		Dollars & Cents per Acre 0219	OR	Total Dollars 0220
[If material and application costs can't be separated, exclude them here and record the total in item 5.]				
5. What was the total cost of all nutrient or fertilizer products applied to the selected field?				
INCLUDE				
• operator, Cost of Fertilizer for sulfur				
• materials Cost of Fertilizer				
EXCLUDE lime, gypsum, purchased manure, and purchased compost.....		Dollars & Cents per Acre 0221	OR	Total Dollars 0222
[If custom applied and the cost of materials can be separated from application costs, include the cost of materials only, otherwise, include both the material and application costs.]				



Custom Application and Cannot Separate Costs

4. Were any nutrients or fertilizers applied by custom applicators?.....		Yes=1 No=3	Code 0214	1
[If item 4=1 continue. Otherwise go to item 5.]				
a. Are you able to report the cost of nutrient or fertilizer materials and custom application separately?.....		Yes=1 No=3	Code 2216	3
[If item 4a = 1 continue. Otherwise go to item 5.]				
b. Excluding the cost of the nutrient or fertilizer materials, how much was spent for custom application of nutrients or fertilizers on the selected field?			Office Use 0215	
INCLUDE				
• operator, landlord, and contractor costs				
• costs for sulfur and micronutrients				
EXCLUDE custom application of lime, gypsum, purchased manure and purchased compost.....			0216	
[If material and application costs can't be separated, exclude them here and record the total in item 5.]				
5. What was the total cost of all nutrient or fertilizer products applied to the selected field?				
INCLUDE				
EXCLUDE lime, gypsum, purchased manure, and purchased compost.....			0221	
		Dollars & Cents per Acre	OR	Total Dollars
		0221		0222
[If custom applied and the cost of materials can be separated from application costs, include the cost of materials only, otherwise, include both the material and application costs.]				

Custom Charge + Cost of Fertilizer

Left Blank



No Custom Application Only Cost of Fertilizer

4. Were any nutrients or fertilizers applied by custom applicators?.....		Yes=1 No=3	Code 0214 3
[If item 4=1 continue. Otherwise go to item 5.]			
a. Are you able to report the cost of nutrient or fertilizer materials and custom application separately?.....		Yes=1 No=3	Code 2216
[If item 4a = 1 continue. Otherwise go to item 5.]			
b. Excluding the cost of the nutrient or fertilizer materials, how much was spent for custom application of nutrients or fertilizers on the selected field?			Office Use 0215
INCLUDE			
• operator, landlord, and contractor costs			
• costs for sulfur and micronutrients			
EXCLUDE custom application of lime, gypsum, purchased manure and purchased compost.....		0215	Left Blank
[If material and application costs can't be separated, exclude them here and record the total in item 5.]			
5. What was the total cost of all nutrient or fertilizer products applied to the selected field?			
INCLUDE			
• operator, landlord, and contractor costs for sulfur			
• material and application costs			
EXCLUDE lime, gypsum, purchased manure, and purchased compost.....		0221	0222
[If custom applied and the cost of materials can be separated from application costs, include the cost of materials only, otherwise, include both the material and application costs.]			



Custom Applied Fertilizer and Pesticides

4. Were any nutrients or fertilizers applied by custom applicators?.....		Yes=1 No=3	Code 0214	1
[If item 4=1 continue. Otherwise go to item 5.]				
a. Are you able to report the cost of nutrient or fertilizer materials and custom application separately?.....		Yes=1 No=3	Code 2216	1
[If item 4a = 1 continue. Otherwise go to item 5.]				
b. [Redacted]		Office Use 0215		
c. [Redacted]		spent for custom application of nutrients or		
d. [Redacted]		Dollars & Cents per Acre 0219	OR	Total Dollars 0220
[If material and application costs can't be separated, exclude them here and record the total in item 5.]				
5. What was the total cost of all nutrient or fertilizer products applied to the selected field?				
INCLUDE				
• operator, landlord, and contractor costs as well as the costs for sulfur and micronutrients				
e. [Redacted]		Dollars & Cents per Acre 0221	OR	Total Dollars 0222
f. [Redacted]		[Redacted]		
[If custom application costs, include the cost of materials only, otherwise, include both the material and application costs.]				



Soil Organic Matter

7. Was a soil test for soil organic matter performed on this cotton field at some point in the last 10 years?.....

Yes=1
No=3

3225

[If item 7 = 1, ask—]

Percent

a. What was the percentage of soil organic matter on the selected field for the most recent test?.....

3226

Range Less than 1% up to 6%

Number

b. How many times have you tested the selected field for soil organic matter in the last 10 years?.....

3227



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Soil or Plant Tissue Tests

- Items 8-12
 - If tests were done
 - What was the recommendation
 - What was the cost of the tests



Nitrogen Applied

- Item 13 Decision on amount to apply
- Item 14 Nitrogen Inhibitors
 - Rate per acre
 - Cost of Inhibitor



Manure

- Acres
- Rate
- When
- Type
- Method Applied
- Source
- Any Costs for Manure or Custom Application
- Testing and Any Changes Made



Thank You!

- Be sure to follow all skips
- Answer YES=1 NO=3
- Ensure Nutrients and Fertilizer applications data is recorded correctly



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Sec. D – Pesticide Applications



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Include/Exclude

- Include:

- Herbicides
- Insecticides
- Fungicides
- Defoliants
- Other Pesticides

- Exclude

- Fertilizer Applications
- Seed Treatments
- Adjuvants/Surfactants
- Applications to fence rows, ponds, canals, and ditches



Time Frame

From the harvest of the last harvested crop until the harvest of the current crop.



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Question 1

D

BIOCONTROL or PESTICIDE APPLICATIONS - SELECTED FIELD

D

Now I have some questions about all the biocontrols or pesticides used on the selected field for the current target crop, including both custom applications and applications made by this operation.

1. Were any herbicides, insecticides, fungicides or other biocontrols or pesticides used on this target crop field for the crop?

Yes=1

No=3

Code	Office Use Edit Table
0302	0300

[Probe for applications made in the fall of *year* and those made earlier if the selected field was fallow.]

If no biocontrols or pesticides applied, go to Section E.



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Column 1: Chemical Product Name

- Obtain the trade name and formulation
- Respondent Booklet
 - Formulation (Liquid or Dry)
 - Type or Class of each product

Chemical Product Name	L I N E	2 What products were applied to the selected field? [Show product codes from Respondent Booklet.]	3 Was this product bought in liquid or dry form? [Enter L or D]	4 If this was part of a tank mix, enter line number of first product in mix.	5 When was this applied? 1 Before planting 3 At planting 4 After planting 5 Defoliation prior to harvest	6 OR 7 How much was applied per acre per application? What was the total amount applied per application in the selected field?	8 [Enter unit code] 1 Pounds 12 Gallons 13 Quarts 14 Pints 15 Liquid Ounces 28 Dry Ounces 30 Grams
	01	61	62	63	64	65 73	74
	02	61	62	63	64	65 73	74



Products with Multiple Versions/Names

- Verify Product with EPA Number

L	H	40910	GLYPHOMAX	62719-323
L	H	40950	GLYPHOSATE	34704-866
L	H	40977	GLYPHOSATE 4 HERBICIDE	51036-312
L	O	90182	GLYPHOSATE 41%	42750-60
L	H	41053	GLYPHOSATE 41% PLUS	42750-61
L	H	41722	GLYPHOSATE 5.4	81927-8
L	H	41086	GLYSUPREME AQUATIC HERBICIDE	80967-5

L	H	41052	LEXAR HERBICIDE	100-1201
L	H	41817	LIBERTY 280 SL HERBICIDE	7969-448
L	I	11399	LIBERTY BIFENTHRIN 2 EC	89168-19
L	H	41366	LIBERTY GLYPHOSATE PLUS	89168-17
L	H	41814	LIBERTY HERBICIDE	7969-447
L	I	11398	LIBERTY IMIDACLOPRID 4 SC	89168-23
L	I	11428	LIBERTY IMIDACLOPRID BIFENTHRIN	89168-21
L	O	90665	LIBERTY MEPIQUAT CHLORIDE	89168-18
L	H	41479	LIFELINE HERBICIDE	70506-310



Column 2: Product Code

- Product Code
 - Found in the Respondent Booklet
 - Record each product on a separate line

Chemical Product Name	L I N E	2 What products were applied to the selected field? [Show product codes from Respondent Booklet.]	3 Was this product bought in liquid or dry form? [Enter L or D]	4 If this was part of a tank mix, enter line number of first product in mix.	5 When was this applied? 1 Before planting 3 At planting 4 After planting 5 Defoliation prior to harvest	6 How much was applied per acre per application?	OR 7 What was the total amount applied per application in the selected field?	8 [Enter unit code] 1 Pounds 12 Gallons 13 Quarts 14 Pints 15 Liquid Ounces 28 Dry Ounces 30 Grams
	01	61	62	63	64	65 .____	73 .____	74
	02	61	62	63	64	65 .____	73 .____	74



Column 3: Formulation

- Product Form
 - Liquid or Dry
 - Key word “BOUGHT”

Chemical Product Name	L I N E	2 What products were applied to the selected field? [Show product codes from Respondent Booklet.]	3 Was this product bought in liquid or dry form? [Enter L or D]	4 If this was part of a tank mix, enter line number of first product in mix.	5 When was this applied? 1 Before planting 3 At planting 4 After planting 5 Defoliation prior to harvest	6 How much was applied per acre per application?	OR	7 What was the total amount applied per application in the selected field?	8 [Enter unit code] 1 Pounds 12 Gallons 13 Quarts 14 Pints 15 Liquid Ounces 28 Dry Ounces 30 Grams
	01	61	62	63	64	65 •__		73 •__	74
	02	61	62	63	64	65 •__		73 •__	74



Column 4: Tank Mixes

- Tank Mix
 - Two products applied in a single application
 - Enter different products on a separate line.
 - Enter the line number of the **first** product in the mix for all products in the mix

Chemical Product Name	LINE	2 What products were applied to the selected field? [Show product codes from Respondent Booklet.]	3 Was this product bought in liquid or dry form? [Enter L or D]	4 If this was part of a tank mix, enter line number of first product in mix.	5 When was this applied? 1 Before planting 3 At planting 4 After planting 5 Defoliation prior to harvest	6 OR 7 How much was applied per acre per application? What was the total amount applied per application in the selected field?	8 [Enter unit code] 1 Pounds 12 Gallons 13 Quarts 14 Pints 15 Liquid Ounces 28 Dry Ounces 30 Grams
	01	61	62	63	64	65 . ____ 73 . ____	74
	02	61	62	63	64	65 . ____ 73 . ____	74



Tank Mixes Example

- Tank Mix
 - Two products applied in a single application
 - Enter different products on a separate line.
 - Enter the line number of the first product in the mix for all products in the mix

Chemical Product Name	L I N E	2 What products were applied to the selected field? [Show product codes from Respondent Booklet.]	3 Was this product bought in liquid or dry form? [Enter L or D]	4 If this was part of a tank mix, enter line number of first product in mix.	5 When was this applied? 1 Before planting 3 At planting 4 After planting 5 Defoliation prior to harvest	6 OR 7 How much was applied per acre per application? What was the total amount applied per application in the selected field?	8 [Enter unit code] 1 Pounds 12 Gallons 13 Quarts 14 Pints 15 Liquid Ounces 28 Dry Ounces 30 Grams
Product A	01	61 40745	62 L	63 1	64 1	65 1.00 73 .	74 14
	02	61	62	63	64	65 . 73 .	74



Tank Mixes Example (cont.)

- Tank Mix
 - Two products applied in a single application
 - Enter different products on a separate line.
 - Enter the line number of the first product in the mix for all products in the mix

Chemical Product Name	L I N E	2 What products were applied to the selected field? [Show product codes from Respondent Booklet.]	3 Was this product bought in liquid or dry form? [Enter L or D]	4 If this was part of a tank mix, enter line number of first product in mix.	5 When was this applied? 1 Before planting 3 At planting 4 After planting 5 Defoliation prior to harvest	6 OR 7 How much was applied per acre per application? What was the total amount applied per application in the selected field?	8 [Enter unit code] 1 Pounds 12 Gallons 13 Quarts 14 Pints 15 Liquid Ounces 28 Dry Ounces 30 Grams
Product A	01	61 40745	62 L	63 1	64 1	65 1.00 73 .	74 14
Product B	02	61 41061	62 L	63 1	64 1	65 1.50 73 .	74 14



Column 5: When Applied

- When Applied

Chemical Product Name	L I N E	2 What products were applied to the selected field? [Show product codes from Respondent Booklet.]	3 Was this product bought in liquid or dry form? [Enter L or D]	4 If this was part of a tank mix, enter line number of first product in mix.	5 When was this applied? 1 Before planting 3 At planting 4 After planting 5 Defoliation prior to harvest	6 OR 7 How much was applied per acre per application? What was the total amount applied per application in the selected field?	8 [Enter unit code] 1 Pounds 12 Gallons 13 Quarts 14 Pints 15 Liquid Ounces 28 Dry Ounces 30 Grams
Product A	01	61 40745	62 L	63 1	64 1	65 1.00 73 .	74 14
Product B	02	61 41061	62 L	63 1	64 1	65 1.50 73 .	74 14



Column 6 or 7: Application Rate

- Total amount OR amount per acre

Chemical Product Name	L I N E	2	3	4	5	6 OR 7		8
		What products were applied to the selected field? [Show product codes from Respondent Booklet.]	Was this product bought in liquid or dry form? [Enter L or D]	If this was part of a tank mix, enter line number of first product in mix.	When was this applied? 1 Before planting 3 At planting 4 After planting 5 Defoliation prior to harvest	How much was applied per acre per application?	What was the total amount applied per application in the selected field?	[Enter unit code] 1 Pounds 12 Gallons 13 Quarts 14 Pints 15 Liquid Ounces 28 Dry Ounces 30 Grams
Product A	01	⁶¹ 40745	⁶² L	⁶³ 1	⁶⁴ 1	⁶⁵ 1 0 0	⁷³ .	⁷⁴ 14
Product B	02	⁶¹ 41061	⁶² L	⁶³ 1	⁶⁴ 1	⁶⁵ 1 5 0	⁷³ .	⁷⁴ 14



Column 8: Unit Code

- Must match the product form

Chemical Product Name	L I N E	2 What products were applied to the selected field? [Show product codes from Respondent Booklet.]	3 Was this product bought in liquid or dry form? [Enter L or D]	4 If this was part of a tank mix, enter line number of first product in mix.	5 When was this applied? 1 Before planting 3 At planting 4 After planting 5 Defoliation prior to harvest	6 How much was applied per acre per application?	OR 7 What was the total amount applied per application in the selected field?	8 [Enter unit code] 1 Pounds 12 Gallons 13 Quarts 14 Pints 15 Liquid Ounces 28 Dry Ounces 30 Grams
Product A	01	61 40745	62 L	63 1	64 1	65 1.00	73 .	74 14
Product B	02	61 41061	62 L	63 1	64 1	65 1.50	73 .	74 14



Column 9: How Applied

Interviewer Manual gives a in-depth description of application methods.

APPLICATIONS CODES for column 9	
1 Broadcast, ground without incorporation	6 Chisel/injected or knifed in
2 Broadcast, ground with incorporation	7 Banded in or over row
3 Broadcast, by aircraft	8 Foliar or directed spray
4 In seed furrow	9 Spot treatments
5 In irrigation water	

	9	10	11	12	13
L I N E	How was this product applied? [Enter code from above.]	Was this applied using variable rate technology (VRT)? Yes = 1 No = 3	How many acres in the selected field were treated with this product? Acres	How many times was it applied? Number	Were these applications made by— 1 Operator, partner, or family member? 2 Custom applicator? 3 Employee/Other?
Product A 01	76 1	83 1	77 20.0	79 1	80 1
Product B 02	76 1	83 1	77 20.0	79 1	80 1



Column 10: Variable Rate Technology

Product A

Product B

L I N E	9	10	11	12	13
	How was this product applied? [Enter code from above.]	Was this applied using variable rate technology (VRT)? Yes = 1 No = 3	How many acres in the selected field were treated with this product? Acres	How many times was it applied? Number	Were these applications made by– 1 Operator, partner, or family member? 2 Custom applicator? 3 Employee/Other?
01	76 1	83 1	77 20.0	79 1	80 1
02	76 1	83 1	77 20.0	79 1	80 1



Column 11: Acres Treated

Product A

Product B

L I N E	9	10	11	12	13
	How was this product applied? [Enter code from above.]	Was this applied using variable rate technology (VRT)? Yes = 1 No = 3	How many acres in the selected field were treated with this product? Acres	How many times was it applied? Number	Were these applications made by– 1 Operator, partner, or family member? 2 Custom applicator? 3 Employee/Other?
01	76 1	83 1	77 20.0	79 1	80 1
02	76 1	83 1	77 20.0	79 1	80 1



Column 12: Number of Applications

- If everything else is the same (rate, who/when/how applied, etc)

		9 How was this product applied? [Enter code from above.]	10 Was this applied using variable rate technology (VRT)? Yes = 1 No = 3	11 How many acres in the selected field were treated with this product? Acres	12 How many times was it applied? Number	13 Were these applications made by— 1 Operator, partner, or family member? 2 Custom applicator? 3 Employee/Other?
Product A	01	76 1	83 1	77 20.0	79 1	80 1
Product B	02	76 1	83 1	77 20.0	79 1	80 1



Column 13: Who

- Who made applications?

		9 How was this product applied? [Enter code from above.]	10 Was this applied using variable rate technology (VRT)? Yes = 1 No = 3	11 How many acres in the selected field were treated with this product? Acres	12 How many times was it applied? Number	13 Were these applications made by– 1 Operator, partner, or family member? 2 Custom applicator? 3 Employee/Other?
Product A	01	76 1	83 1	77 20.0	79 1	80 1
Product B	02	76 1	83 1	77 20.0	79 1	80 1



Tank Mix Example #2

Chemical Product Name	L I N E	2 What products were applied to the selected field? [Show product codes from Respondent Booklet.]	3 Was this product bought in liquid or dry form? [Enter L or D]	4 If this was part of a tank mix, enter line number of first product in mix.	5 When was this applied? 1 Before planting 3 At planting 4 After planting 5 Defoliation prior to harvest	6 OR 7 How much was applied per acre per application? What was the total amount applied per application in the selected field?	8 [Enter unit code] 1 Pounds 12 Gallons 13 Quarts 14 Pints 15 Liquid Ounces 28 Dry Ounces 30 Grams
Roundup Ultra	01	61 41159	62 L	63 —	64 4	65 4,00 73 . _ _	74 15
Banvel+Atrazine	02	61 41061	62 L	63 2	64 4	65 6,00 73 . _ _	74 15
Clarity	03	61 40570	62 L	63 2	64 4	65 2,00 73 . _ _	74 15
Aztec 2.1	04	61 11310	62 D	63 —	64 5	65 2,00 73 . _ _	74 28



Tank Mix Example #2 (Cont.)

APPLICATIONS CODES for column 9	
1 Broadcast, ground without incorporation	6 Chisel/injected or knifed in
2 Broadcast, ground with incorporation	7 Banded in or over row
3 Broadcast, by aircraft	8 Foliar or directed spray
4 In seed furrow	9 Spot treatments
5 In irrigation water	

L I N E	9	10	11	12	13
	How was this product applied? [Enter code from above.]	Was this applied using variable rate technology (VRT)? Yes = 1 No = 3	How many acres in the selected field were treated with this product? Acres	How many times was it applied? Number	Were these applications made by– 1 Operator, partner, or family member? 2 Custom applicator? 3 Employee/Other?
01	76 3	83 1	77 50.0	79 1	80 2
02	76 8	83 1	77 50.0	79 1	80 1
03	76 8	83 1	77 50.0	79 1	80 1
04	76 1	83 1	77 50.0	79 1	80 1



Question 2

EXAMPLE

2. For biocontrols or pesticides not listed in Respondent Booklet, specify--

Line	Pesticide Type (Herbicide, Insecticide, Fungicide, etc.)	EPA No. or Trade Name and Formulation	Form Purchased (Liquid or Dry)	Where Purchased (Ask only if EPA No. cannot be reported)
06	Insecticide	Danitol 2.4EC, EPA #39398-17	Liquid	Midland Chem Supply
			Some formulations (2, 3) A Aerosol B Bait D Dust DF Dry flowable E, EC Emulsifiable concentrate FL Flowable G Granule M Microencapsulated P Pellet RTU Ready-to-use SP Soluble powder ULV Ultralow-volume concentrate WP Wettable powder WDG Water-dispersible granule	



Long Version (PPCR): Differences

L I N E	9 How was this product applied? [Enter code from above.]	10 Was this applied using variable rate technology (VRT)? Yes = 1 No = 3	11 How many acres in the selected field were treated with this product? Acres	12 How many times was it applied? Number	13 Were these applications made by– 1 Operator, partner, or family member? 2 Custom applicator? 3 Employee/Other?	14 What was the cost per unit of the product?	
						Dollars & Cents Per Unit	Unit Code 1 Pounds 15 Liquid Ounces 12 Gallons 28 Dry ounces 13 Quarts 30 Grams 14 Pints
01	76	83	77	79	80	81	82
02	76	83	77	79	80	81	82



Long Version (PPCR): Differences (cont.)

4. What was the total cost of all chemical, biocontrol, or pesticide products applied to the selected field? INCLUDE operator, landlord, and contractor costs, defoliants, herbicides, insecticides, fungicides, surfactants, wetting agents, growth regulators, and materials applied before planting and during 2024 fallow period. EXCLUDE seed treatments.....

Dollars & Cents
per Acre

OR

Total Dollars

0334

0335

Dollars & Cents
per Acre

OR

Total Dollars

- a. How much was spent for herbicide products applied to the selected field? INCLUDE operator, landlord, and contractor costs.....

3034

3035

Dollars & Cents
per Acre

OR

Total Dollars

- b. How much was spent for insecticide products applied to the selected field? INCLUDE operator, landlord, and contractor costs.....

3036

3037

Dollars & Cents
per Acre

Total Dollars

- c. How much was spent for fungicide products applied to the selected field? INCLUDE operator, landlord, and contractor costs.....

3038

3039

Note: If custom applied and the costs for materials can be separated from application costs, include the cost for materials only. Otherwise, report both the material and application costs in item 4.



Things to help...

- Supplements
- Use of farm records
- Respondent Booklet



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Section D – Final Reminders

- Restricted Use Pesticides (RUP's) - record keeping requirements for RUP's can help the respondent report pesticide applications.
- **IMPORTANT:** We want to collect all pesticide applications through harvest.



Section D – Final Reminders (cont.)

- Do not record
 - record the spray volume applied to the field.
 - the inclusion of adjuvants, etc.
 - liquid fertilizer solutions applied in conjunction with a pesticide
- Use the conversion table in the respondent booklet, if necessary, if other units are offered
 - (2 tablespoons = 1 ounce dry)
- Unit code and formulation code must be consistent.



Thanks for Watching!!



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Sec. E - Pest Management



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Section E: Purpose

- To provide data about pest management practices that growers use on their crops.
 - Alternative to pesticides
 - Practices which improve the effectiveness of pesticides



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What is a pest?

Pest includes...

- Weeds
- Insects
- Diseases
- Fungi



What kind of data are we after?

Questions focus on...

- Prevention
- Avoidance
- Monitoring
- Suppression



Watch those skip patterns!

- *Example 1*

3. Were pesticides with different mechanisms of action rotated or tank mixed for the primary purpose of keeping pests from becoming resistant to pesticides?.....

Yes=1
No=3

0802

[Enumerator Action: Were herbicide (pesticide product codes 40000–49999) applications reported in Section D, item 1, column 2?]

☐ Yes – Continue ☐ No – Go to item 6

- *Example 2*

8. In 20XX, how was the selected field primarily scouted for insects, weeds, diseases, and/or beneficial organisms?.....

- 1 By deliberately going to the field specifically for scouting activities [Enter code 1 and go to item 9.]
2 By conducting general observations while performing routine tasks [Enter code 2 and go to item 10.]
3 The selected field was not scouted. [Enter code 3 and go to item 13.]

Code

0808



“Specific Purpose” = Operator’s Intent

Did you do any of the following other types of pest management for the **specific purpose** of managing or reducing the spread of pests in the selected field?

		Code
a. Use the services of a diagnostic laboratory for pest identification or soil plant tissue pest analysis for the selected field?.....	Yes=1 No=3	0841
b. Plow down crop residue using conventional tillage?.....	Yes=1 No=3	0842
c. Remove/burn down crop residue?.....	Yes=1 No=3	0843
d. Rotate crops in the selected field during the past three years?.....	Yes=1 No=3	0844
e. Maintain ground covers, mulches, or other physical barriers?.....	Yes=1 No=3	0845
f. Choose crop variety because of specific resistance to a certain pest?.....	Yes=1 No=3	0846
g. Use no-till or minimum till?.....	Yes=1 No=3	0847
h. Plant crop variety because of specific resistance to a certain pest?.....	Yes=1 No=3	0848



Quiz time!

Did you do any of the following other types of pest management for the specific purpose of managing or reducing the spread of pests in the selected field?

- a. Use the services of a diagnostic laboratory for pest identification or soil plant tissue pest analysis for the selected field?.....
- b. Plow down crop residue using conventional tillage?.....
- c. Remove/burn down crop residue?.....
- d. Rotate crops in the selected field during the past three years?.....
- e. Maintain ground covers, mulches, or other physical barriers?.....
- f. Choose crop variety because of specific resistance to a certain pest?.....
- g. Use no-till or minimum till?.....

Code	
Yes=1 No=3	0841
Yes=1 No=3	0842
Yes=1 No=3	0843
Yes=1 No=3	0844
Yes=1 No=3	0845
Yes=1 No=3	0846
Yes=1 No=3	0847
Yes=1 No=3	0848



Quiz time!

Did you do any of the following other types of pest management for the specific purpose of managing or reducing the spread of pests in the selected field?

Code

- | | | |
|--|---------------|------|
| a. Use the services of a diagnostic laboratory for pest identification or soil plant tissue pest analysis for the selected field?..... | Yes=1
No=3 | 0841 |
| b. Plow down crop residue using conventional tillage?..... | Yes=1
No=3 | 0842 |
| c. Remove/burn down crop residue?..... | Yes=1
No=3 | 0843 |
| d. Rotate crops in the selected field during the past three years?..... | Yes=1
No=3 | 0844 |
| e. Maintain ground covers, mulches, or other physical barriers?..... | Yes=1
No=3 | 0845 |
| f. Choose crop variety because of specific resistance to a certain pest?..... | Yes=1
No=3 | 0846 |
| g. Use no-till or minimum till?..... | Yes=1
No=3 | 0847 |

Yes=1
No=3

0848



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Sec. E: Key Points

- Pests = weeds, insects, diseases, fungi
- Be familiar with the skip patterns
- Leave detailed notes





ARMS 2

Section F: Field Operations

Overview

- Field Operations Table
- Labor
- Precision Agriculture



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Field Operations Table

- Time frame
- Order/sequence
- Types of field operations
- Respondent booklet codes

1	2	3	4	5	[If Column 5 = code 6, skip columns 6 thru 11]					
L I N E	S E Q U E N C E	What operation or equipment was used?	[Record machine code from Respondent Booklet.]	Who was the machine operator? [Enter code from above.]	6 What was the size or swath of the [machine] used?	7 [Record size unit code.] 1 Feet 2 Row 3 Moldboard bottoms Hauling 4 Pounds 5 Bushels 6 Tons	8 How many acres were covered? EXCLUDE land forming and hauling operations.	OR 9 How many total hours were spent on land forming and hauling? [Example: backhoes, disk border maker, ditcher, rear mounted blade, trucks, wagons, forklift etc.]	10 What power source was used? Tractors 1 <40 HP 2 40-99 HP 3 100-149 HP 4 150-199 HP 5 >=200 HP OR 66 Animal Drawn 77 Pick-up ^{1/} 99 Self-Propelled	11 What was the fuel type of the tractor? [Record fuel type only if Column 10 equals 1-5] 1 Diesel 2 Gasoline 3 LP gas 4 Other
No.	No.		Code	Code		Code	Acres	Hours	Code	Code
01	87		88	89	90	91	92 .__	93	94	95
02	87		88	89	90	91	92 .__	93	94	95
03	87		88	89	90	91	92 .__	93	94	95



1. Including custom operations, I need to list field work performed by machines on the selected field for the 20 XX target crop. Please...

- begin with the first field operation after harvest of the previous crop, including operations for a cover crop established since the previous crop was harvested. If fallow during XX, list operations starting with fall XX
- list the operations in order through harvest and hauling of this crop to storage or first point of sale; and
- maintain the order of tandem hook-ups.

Codes for Column 5	
1	You (the Operator)
2	Partner
3	Unpaid Worker
4	Paid Part-time or Seasonal Worker
5	Paid Full-time Worker
6	Custom Applicator

Office Use
Lines in Table

0499

Check List

INCLUDE all field work using machines for—

- ☐ Land forming/Levee Building
- ☐ Tillage
- ☐ Preparing for Irrigation
- ☐ Planting
- ☐ Fertilizer & Pesticide applications
- ☐ Harvesting
- ☐ Module Building
- ☐ Hauling from field to gin

EXCLUDE

- ☐ Lime & Gypsum/land plaster applications
- ☐ Compost & Non-commercial manure applications



1	2	3	4	5
L I N E	S E Q U E N C E	What operation or equipment was used?	[Record machine code from Respondent Booklet.]	Who was the machine operator? [Enter code from above.]
No.	No.		Code	Code
01	⁸⁷ 1		88	89
02	⁸⁷ 2		88	89
03	⁸⁷ 3		88	89
04	⁸⁷ 4		88	89
05	⁸⁷ 5		88	89
06	⁸⁷ 6		88	89
07	⁸⁷ 7		88	89

Line vs. Sequence

- Line numbers are administrative identifiers
- Sequence numbers are for you to fill out
 - Indicate relative order of operations
 - Begin with 1
 - Do not skip any sequence numbers



1	2	3	4	5
L I N E	S E Q U E N C E	What operation or equipment was used?	[Record machine code from Respondent Booklet.]	Who was the machine operator? [Enter code from above.]
No.	No.		Code	Code
01	⁸⁷ 1		88	89
02	⁸⁷ 2		88	89
03	⁸⁷ 3		88	89
04	⁸⁷ 4		88	89
05	⁸⁷ 4		88	89
06	⁸⁷ 5		88	89
07	⁸⁷ 6		88	89

Tandem operations

- Two or more field operations
- At the same time
- Powered by the same machine



1	2	3	4	5
L I N E	S E Q U E N C E	What operation or equipment was used?	[Record machine code from Respondent Booklet.]	Who was the machine operator? [Enter code from above.]
No.	No.		Code	Code
01	87 1	~~~~~	88 ~~~	89 ~~~
02	87 2	~~~~~	88 ~~~	89 ~~~
03	87 2	~~~~~	88 ~~~	89 ~~~
04	87 3	~~~~~	88 ~~~	89 ~~~
05	87 4	~~~~~	88 ~~~	89 ~~~
06	87 5	~~~~~	88 ~~~	89 ~~~
07	87 6	~~~~~	88 ~~~	89 ~~~
08	87 7	~~~~~	88 ~~~	89 ~~~
09	87 7	~~~~~	88 ~~~	89 ~~~
10	87 8	~~~~~	88 ~~~	89 ~~~
11	87		88	89

See a problem?

- After the correction, a sequence number is skipped



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1	2	3	4	5
L I N E	S E Q U E N C E	What operation or equipment was used?	[Record machine code from Respondent Booklet.]	Who was the machine operator? [Enter code from above.]
No.	No.		Code	Code
01	87 1	~~~~~	88 ~~~	89 ~~~
02	87 2	~~~~~	88 ~~~	89 ~~~
03	87 2	~~~~~	88 ~~~	89 ~~~
04	87 3	~~~~~	88 ~~~	89 ~~~
05	87 4	~~~~~	88 ~~~	89 ~~~
06	87 4	~~~~~	88 ~~~	89 ~~~
07	87 5	~~~~~	88 ~~~	89 ~~~
08	87 6	~~~~~	88 ~~~	89 ~~~
09	87 6	~~~~~	88 ~~~	89 ~~~
10	87 7	~~~~~	88 ~~~	89 ~~~
11	87		88	89

See a problem?

- After the correction, a sequence number is skipped
- Update the later sequence numbers so none are skipped
- Follow-up question: Which of these lines are **Tandem Operations**?
 - Lines 2 and 3
 - Lines 8 and 9



1	2	3	4	5
L I N E	S E Q U E N C E	What operation or equipment was used?	[Record machine code from Respondent Booklet.]	Who was the machine operator? [Enter code from above.]
No.	No.		Code	Code
01	⁸⁷ 1	Pesticide	⁸⁸ 92	⁸⁹
02	⁸⁷ 2	Fertilized	⁸⁸ 72	⁸⁹
03	⁸⁷ 3	Planted	⁸⁸ 113	⁸⁹
04	⁸⁷ 4	Pesticide	⁸⁸ 91	⁸⁹
05	⁸⁷ 5	Harvest	⁸⁸ 123	⁸⁹
06	⁸⁷ 6	Grain Cart	⁸⁸ 209	⁸⁹
07	⁸⁷ 7	Semi	⁸⁸ 304	⁸⁹



1	2	3	4	5
L I N E	S E Q U E N C E	What operation or equipment was used?	[Record machine code from Respondent Booklet.]	Who was the machine operator? [Enter from List A]
No.	No.		Code	
01	⁸⁷ 1	Pesticide	⁸⁸ 92	⁸⁹
02	⁸⁷ 2	Fertilized	⁸⁸ 72	⁸⁹
03	⁸⁷ 3	Planted	⁸⁸ 113	⁸⁹
04	⁸⁷ 4	Pesticide	⁸⁸ 91	⁸⁹
05	⁸⁷ 5	Harvest	⁸⁸ 123	⁸⁹
06	⁸⁷ 6	Grain Cart	⁸⁸ 209	⁸⁹
07	⁸⁷ 7	Semi	⁸⁸ 304	⁸⁹

MACHINERY and IMPLEMENT CODES

Section F, Item 1, Columns 3 & 4

PLOWS and DISKS

- 01 Chisel Plow (Big Ox)
02 Coulter Plow
(Coulter Chisel, Soil
Saver, Soil Conservor)
03 Deep Ripper
(Knife, Bed knife, Slide)
04 Disk Plow
- Moldboard**
05 Regular
06 Two Way
07 Stubble-mulch
(Noble, Sweeps, Hoeme
Plow, Muckeroy Plow)
08 Subsoiler
(Chisel, Ripper, V-ripper)
09 Disk-chisel
(Mulch Tiller)

Offset Disk

- 10 Heavy Disk
11 Light Disk
12 One-way Disk
(Disk Tiller)
13 Single Disk

Tandem Disk

- 14 Plowing
15 Regular
16 Paraplow

MISCELLANEOUS TILLAGE

- 61 Land-all, Do-all, Mix-n-till, Till-all
(Disk, Shovels, Reel & Spikes)
62 Mulch Treader, Picker,
Treader, Skew
63 Roto-tiller
64 Roterra (Roto-spike, Lely)
65 Sand-fighter
66 Soil Finisher
(Finishing Tool, Mulch Finisher
Tri-tiller, Task Master)
67 Root Crown Puller
68 Stalk Puller/Chopper
69 Vertical Tiller
70 Strip Tiller

BEDDERS-SHAPERS

- 41 Bedder (Shaper)
(Bedshaper, Crowder)
42 Bed Shaper
- Disk**
43 Hipper
44 Row
45 Float
46 Lister (Middle-buster)
47 Rorovator-bedder
48 Seedbed Roller

HARROWS (DRAGS)

- 30 Heavy Harrow
31 Field Conditioner
(Scratcher,
Seed Bed Conditioner,
Soil Conditioner,
Ground Hog)
32 Finishing
(Harrogator, Spiral, Roller,
Knives, Shanks, Pegs,
Smoother)
33 Flex-tine Tooth
(Coil Tine)
34 Multi-weeder
(Cultivator & Harrow)
35 Rail, Pipe, Log, Plank
36 Rod Weeder
37 Roller (Culti-mulcher,
Pulvi-mulcher, Crumbler,
Packer-mulcher,
Packer & Shanks)
38 Spike Tooth
39 Spring Tooth
40 Powered Spike Tooth Harrow

1	2	3	4	5
L I N E	S E Q U E N C E	What operation or equipment was used?	[Record machine code from Respondent Booklet.]	What was the machine used for?
No.	No.		Code	
01	87 1	Pesticide	88 92	89
02	87 2	Fertilized	88 72	89
03	87 3	Planted	88 113	89
04	87 4	Pesticide	88 91	89
05	87 5	Harvest	88 123	89
06	87 6	Grain Cart	88 209	89
07	87 7	Semi	88 304	89

(Mulch Tiller)

Offset Disk

10 Heavy Disk

11 Light Disk

12 One-way Disk (Disk Tiller)

13 Single Disk

Tandem Disk

14 Plowing

15 Regular

16 Paraplow

BEDDERS-SHAPERS

41 Bedder (Shaper) (Bedshaper, Crowder)

42 Bed Shaper

Disk

43 Hipper

44 Row

45 Float

46 Lister (Middle-buster)

47 Rorovator-bedder

48 Seedbed Roller (Flat Roller)

49 Sub-soil Bedder (Ripper-hipper)

50 Discovator

PACKERS

51 Culti-packer (Pulverizer, Crow-foot, Serrated, Ring, Spiral)

Roller-packer

52 Attachment

53 Smooth & Flat

PLANTERS

111 Bedder-shaper Planter

112 Lister-bedder

113 No-till, Minimum Till, (Ripper Planter)

114 Conventional, Regular (Tye, Flex)

115 Air Delivery/vacuum

116 Ridge till

FERTILIZER APPLICATORS

71 Aerial (Airplane)

72 Attachment to implement

73 Manure Spreader

74 Self-propelled

75 Truck Spreader

Tractor Mounted

76 Anhydrous

77 Dry

78 Liquid

Trailer Mounted

79 Anhydrous

80 Dry

81 Liquid

(Cultivator & Harrow)

35 Rail, Pipe, Log, Plank

36 Rod Weeder

37 Roller (Culti-mulcher, Pulvi-mulcher, Crumbler, Packer-mulcher, Packer & Shanks)

38 Spike Tooth

39 Spring Tooth

40 Powered Spike Tooth Harrow

CULTIVATORS

Field Cultivators

21 Regular Digger, Triple K, Danish Tined, Swedish Tined, Incorporated, S-tine, Cultivator, Vibra-shank Harrow, Lilliston Tiller

26 Heavy Duty (Duckfoot Cultivator)

27 Marker

28 Fallow Master

22 Furrow-out Cultivator

23 Rotary Hoe (Crust Buster)

Row Cultivators

24 Disk Sweep, Shovel

25 Rolling, Rotary

1	2	3	4	5
L I N E	S E Q U E N C E	What operation or equipment was used?	[Record machine code from Respondent Booklet.]	Who was the machine operator [Enter code from above]
No.	No.		Code	Code
01	⁸⁷ 1	Pesticide	⁸⁸ 92	⁸⁹
02	⁸⁷ 2	Fertilized	⁸⁸ 72	⁸⁹
03	⁸⁷ 3	Planted	⁸⁸ 113	⁸⁹
04	⁸⁷ 4	Pesticide	⁸⁸ 91	⁸⁹
05	⁸⁷ 5	Harvest	⁸⁸ 123	⁸⁹
06	⁸⁷ 6	Grain Cart	⁸⁸ 209	⁸⁹
07	⁸⁷ 7	Semi	⁸⁸ 304	⁸⁹

CHEMICAL APPLICATIONS

- 91 Aerial (Airplane)
- 92 Attachment to implement
- 93 Largest Self propelled
(or Large Truck)
- 94 Motorcycle/atv Sprayer
- 95 Small Self-propelled
(Spray-coupe, Hi-cycle)
- 96 Small Truck (Skid Mounted)
- 97 Tractor Mounted
- 98 Trailer Mounted

DRILLS and SEEDERS

- 101 Aerial Seeding
- 102 Broadcast Seeder

Drill

- 103 Air Delivery
- 104 Lister Disk
- 105 No-till or minimum till
- 106 Plain
- 107 Press, Disk or Hoe

HARVESTING EQUIPMENT

Small Grains/Row Crops Combine

- 121 Hillside
- 122 Self propelled, 2wd

LAND FORMING EQUIPMENT

- 171 Backhoe
- 172 Disk Border Maker
- 173 Ditch Closer
- 174 Ditcher
- 175 Levee Plow Disk
- 176 Quarter Drain Machine
- 177 Rear Mounted Blade
- 178 Corrugator
(Furrow Dicer, Dammar
Dicer, Dicer)
- 180 Land Plane Leveler
(Water Leveler)
- 181 Laser Planer, Laser Leveler
- 182 Gate Setter
- 183 Bull Dozer
- 184 Polypipe roller
- 197 Rock Picker

ENUMERATOR NOTE:

For Land Forming Equipment codes 171 – 184, enter Total Hours Operated in column 9.

MOWERS and BALERS

- 141 Amish Harvester

Baler

- 145 Motor Mounted
- 146 PTO (Large)
- 147 PTO (Small)
- 148 Self-propelled
- 149 Stacker, Automatic

HAULING EQUIPMENT

Bale wagon/mover

- 142 Bale wagon (PTO)
- 143 Bale Wagon (Self-propelled)
- 144 Bale Loader
- 158 Stack Mover
- 160 Front End Loader
- 161 Round Bale Mover
- 195 Hay wagon
- 224 Forklift

Trailers

- 194 General Purpose Wagon or
Cart
- 195 Hay Wagon
- 208 Gravity Wagon
- 209 Grain Cart with Auger
- 210 Grain Cart with Auger (Self-
Propelled)
- 221 Forage Wagon
- 222 Dump Wagon
- 229 Bin Trailer
- 228 Other Trailers

Trucks

- 301 Single Axle
- 302 Tandem Axle
- 303 Tri Axle
- 304 Semi
- 305 Other Trucks

ENUMERATOR NOTE:

For Hauling Equipment codes above, enter Total Hours Operated in column 9.

OTHER IMPLEMENTS

1	2	3	4	5
L I N E	S E Q U E N C E	What operation or equipment was used?	[Record machine code from Respondent Booklet.]	Who was the machine operator? [Enter from a...]
No.	No.		Code	Co
01	87 1	Pesticide	88 92	89
02	87 2	Fertilized	88 72	89
03	87 3	Planted	88 113	89
04	87 4	Pesticide	88 91	89
05	87 5	Harvest	88 123	89
06	87 6	Grain Cart	88 209	89
07	87 7	Semi	88 304	89

101 Aerial Seeding
102 Broadcast Seeder

Drill
103 Air Delivery
104 Lister Disk
105 No-till or minimum till
106 Plain
107 Press, Disk or Hoe

ENUMERATOR NOTE:

For Land Forming Equipment codes 171 – 184, enter Total Hours Operated in column 9.

229 Bin Trailer
228 Other Trailers

Trucks
301 Single Axle
302 Tandem Axle
303 Tri Axle
304 Semi
305 Other Trucks

MOWERS and BALERS

141 Amish Harvester

Baler
145 Motor Mounted
146 PTO (Large)
147 PTO (Small)
148 Self-propelled
159 Stacker, Automatic

Mowers
149 Mower-chopper-Rotary
150 Conditioner/PTO
151 Self-propelled
152 Drum disk
153 Flail
154 Sickle

Rake
155 Dump
156 Side Delivery
157 Wheel
162 Hay Tedder
234 Brush Rake Sweeper

ENUMERATOR NOTE:
For Hauling Equipment codes above, enter Total Hours Operated in column 9.

HARVESTING EQUIPMENT

Small Grains/Row Crops Combine

121 Hillside
122 Self propelled, 2wd
123 Self-propelled, 4wd
124 Track
125 PTO/motor Mounted

Windrower-swather
126 (Grain/hay)PTO
127 (Grain/hay) self-propelled

134 Hand Harvesting

OTHER IMPLEMENTS

191 Burn Buggy
192 Chaff/straw Saver
193 Electric-discharge Weed Killer
196 Off-field Thresher
198 Rock Windower or Rake
199 Rodent (Gopher) Killer
200 Roller Groover
201 Rubber-wheeled Weed Puller
202 Flail Shredder
203 Rotary Shredder
204 Silage Harvester
205 Stalk Shredder, Stalk Cutter
206 Swath Roller
207 Tractor or Truck–No attachments
223 Flame Thrower

PTO Power Take-off
WD Wheel Drive

1	2	3	4	5
L I N E	S E Q U E N C E	What operation or equipment was used?	[Record machine code from Respondent Booklet.]	Who was the machine operator? [Enter code from above.]
No.	No.		Code	Code
01	⁸⁷ 1	Pesticide	⁸⁸ 92	⁸⁹
02	⁸⁷ 2	Fertilized	⁸⁸ 72	⁸⁹
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06	⁸⁷ 6	Grain Cart	⁸⁸ 209	⁸⁹
07	⁸⁷ 7	Semi	⁸⁸ 304	⁸⁹

Check List

INCLUDE all field work using machines for--

- ☐ Land forming/Levee Building
- ☐ Tillage
- ☐ Preparing for Irrigation
- ☐ Planting
- ☐ Fertilizer & Pesticide applications
- ☐ Harvesting & Hauling to storage or first point of sale

EXCLUDE

- ☐ Lime & Gypsum/land plaster applications
- ☐ Compost & Non-commercial manure applications



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1	2	3	4	5
L I N E	S E Q U E N C E	What operation or equipment was used?	[Record machine code from Respondent Booklet.]	Who was the ma- chine oper- ated by? [Enter from column 5]
No	No		Code	C
01	87 1	Pesticide	88 ??	89
02	87 2	Fertilized	88 72	89
03	87 3	Planted	88 113	89
04	87 4	Pesticide	88 91	89
05	87 5	Harvest	88 123	89
06	87 6	Grain Cart	88 209	89
07	87 7	Semi	88 304	89

CHEMICAL APPLICATIONS

- 91 Aerial (Airplane)
- 92 Attachment to implement
- 93 Largest Self propelled
(or Large Truck)
- 94 Motorcycle/atv Sprayer
- 95 Small Self-propelled
(Spray-coupe, Hi-cycle)
- 96 Small Truck (Skid Mounted)
- 97 Tractor Mounted
- 98 Trailer Mounted

LAND FORMING EQUIPMENT

- 171 Backhoe
- 172 Disk Border Maker
- 173 Ditch Closer
- 174 Ditcher
- 175 Levee Plow Disk
- 176 Quarter Drain Machine
- 177 Rear Mounted Blade
- 178 Corrugator
(Furrow Dicer, Dammar
Dicer, Dicer)
- 180 Land Plane Leveler
(Water Leveler)
- 181 Laser Planer, Laser Leveler
- 182 Gate Setter
- 183 Bull Dozer
- 184 Polypipe roller
- 197 Rock Picker

HAULING EQUIPMENT

- Bale wagon/mover**
- 142 Bale wagon (PTO)
 - 143 Bale Wagon (Self-propelled)
 - 144 Bale Loader
 - 158 Stack Mover
 - 160 Front End Loader
 - 161 Round Bale Mover
 - 195 Hay wagon
 - 224 Forklift

Trailers

- 194 General Purpose Wagon or
Cart
- 195 Hay Wagon
- 208 Gravity Wagon
- 209 Grain Cart with Auger
- 210 Grain Cart with Auger (Self-
Propelled)
- 221 Forage Wagon
- 222 Dump Wagon
- 229 Bin Trailer
- 228 Other Trailers

Trucks

- 301 Single Axle
- 302 Tandem Axle
- 303 Tri Axle
- 304 Semi
- 305 Other Trucks

ENUMERATOR NOTE:

For Land Forming Equipment codes 171 –
184, enter Total Hours Operated in
column 9.

DRILLS and SEEDERS

- 101 Aerial Seeding
- 102 Broadcast Seeder

Drill

- 103 Air Delivery
- 104 Lister Disk
- 105 No-till or minimum till
- 106 Plain
- 107 Press, Disk or Hoe

HARVESTING EQUIPMENT

Small Grains/Row Crops Combine

- 121 Hillside
- 122 Self propelled, 2wd

MOWERS and BALERS

- 141 Amish Harvester

Baler

- 145 Motor Mounted
- 146 PTO (Large)
- 147 PTO (Small)
- 148 Self-propelled
- 150 Stacker, Automatic

ENUMERATOR NOTE:

For Hauling Equipment codes above,
enter Total Hours Operated in
column 9.

OTHER IMPLEMENTS

1 L I N E	2 S E Q U E N C E	3 What operation or equipment was used?	4 [Record machine code from Respondent Booklet.]	5 Who was the machine operator? [Enter code from above.]	[If Column 5 = code 6, skip columns 6 thru 11]						
					6 What was the size or swath of the	7 [Record size unit code.] 1 Feet	8 How many acres were covered?	OR	9 How many total hours were spent on land forming	10 What power source was used? Tractors	11 What was the fuel type of the tractor? [Record fuel type only if Column 10 equals 1-5]
					Codes for Column 5 1 You (the Operator) 2 Partner 3 Unpaid Worker 4 Paid Part-time or Seasonal Worker 5 Paid Full-time Worker 6 Custom Applicator						1 <40 HP 2 40-99 HP 3 100-149 HP 4 150-199 HP 5 >=200 HP OR 66 Animal Drawn 77 Pick up ^{1/} 99 Self-Propelled
No.	No.		Code	Code	Code	Code	Acres	Hours	Code	Code	
01	⁸⁷ 1	Pesticide	⁸⁸ 92	⁸⁹ 4	90	91	92	_____	93	94	95
02	⁸⁷ 2	Fertilized	⁸⁸ 72	⁸⁹ 4	90	91	92	_____	93	94	95
03	⁸⁷ 3	Planted	⁸⁸ 113	⁸⁹ 1	90	91	92	_____	93	94	95
04	⁸⁷ 4	Pesticide	⁸⁸ 91	⁸⁹ 6	90	91	92	_____	93	94	95
05	⁸⁷ 5	Harvest	⁸⁸ 123	⁸⁹ 1	90	91	92	_____	93	94	95
06	⁸⁷ 6	Grain Cart	⁸⁸ 209	⁸⁹ 4	90	91	92	_____	93	94	95
07	⁸⁷ 7	Semi	⁸⁸ 304	⁸⁹ 6	90	91	92	_____	93	94	95



1 L I N E	2 S E Q U E N C E	3 What operation or equipment was used?	4 [Record machine code from Respondent Booklet.]	5 Who was the machine operator? [Enter code from above.]	[If Column 5 = code 6, skip columns 6 thru 11]					
					6 What was the size or swath of the [machine] used?	7 [Record size unit code.] 1 Feet 2 Row 3 Moldboard bottoms Hauling 4 Pounds 5 Bushels 6 Tons	8 How many acres were covered? EXCLUDE land forming and hauling operations.	9 How many total hours were spent on land forming and hauling? [Example: backhoes, disk border maker, ditcher, rear mounted blade, trucks, wagons, forklift etc.]	10 What power source was used? Tractors 1 <40 HP 2 40-99 HP 3 100-149 HP 4 150-199 HP 5 >=200 HP OR 66 Animal Drawn 77 Pick up ^{1/} 99 Self-Propelled	11 What was the fuel type of the tractor? [Record fuel type only if Column 10 equals 1-5] 1 diesel 2 gasoline 3 LP gas 4 other
No.	No.		Code	Code		Code	Acres	Hours	Code	Code
01	⁸⁷ 1	Pesticide	⁸⁸ 92	⁸⁹ 4	⁹⁰ 120	⁹¹ 1	⁹² .__	⁹³	⁹⁴	⁹⁵
02	⁸⁷ 2	Fertilized	⁸⁸ 72	⁸⁹ 4	⁹⁰ 35	⁹¹ 1	⁹² .__	⁹³	⁹⁴	⁹⁵
03	⁸⁷ 3	Planted	⁸⁸ 113	⁸⁹ 1	⁹⁰ 30	⁹¹ 1	⁹² .__	⁹³	⁹⁴	⁹⁵
04	⁸⁷ 4	Pesticide	⁸⁸ 91	⁸⁹ 6	⁹⁰ --	⁹¹ --	⁹² .__	⁹³	⁹⁴	⁹⁵
05	⁸⁷ 5	Harvest	⁸⁸ 123	⁸⁹ 1	⁹⁰ 30	⁹¹ 1	⁹² .__	⁹³	⁹⁴	⁹⁵
06	⁸⁷ 6	Grain Cart	⁸⁸ 209	⁸⁹ 4	⁹⁰ 20	⁹¹ 6	⁹² .__	⁹³	⁹⁴	⁹⁵
07	⁸⁷ 7	Semi	⁸⁸ 304	⁸⁹ 6	⁹⁰ --	⁹¹ --	⁹² .__	⁹³	⁹⁴	⁹⁵



1 L I N E	2 S E Q U E N C E	3 What operation or equipment was used?	4 [Record machine code from Respondent Booklet.]	5 Who was the machine operator? [Enter code from above.]	[If Column 5 = code 6, skip columns 6 thru 11]					
					6 What was the size or swath of the [machine] used?	7 [Record size unit code.] 1 Feet 2 Row 3 Moldboard bottoms Hauling 4 Pounds 5 Bushels 6 Tons	8 How many acres were covered? EXCLUDE land forming and hauling operations.	OR 9 How many total hours were spent on land forming and hauling? [Example: backhoes, disk border maker, ditcher, rear mounted blade, trucks, wagons, forklift etc.]	10 What power source was used? Tractors 1 <40 HP 2 40-99 HP 3 100-149 HP 4 150-199 HP 5 >=200 HP OR 66 Animal Drawn 77 Pick up ^{1/} 99 Self-Propelled	11 What was the fuel type of the tractor? [Record fuel type only if Column 10 equals 1-5] 1 diesel 2 gasoline 3 LP gas 4 other
No.	No.		Code	Code		Code	Acres	Hours	Code	Code
01	⁸⁷ 1	Pesticide	⁸⁸ 92	⁸⁹ 4	⁹⁰ 120	⁹¹ 1	⁹² .__	⁹³	⁹⁴	⁹⁵
02	⁸⁷ 2	Fertilized	⁸⁸ 72	⁸⁹ 4	⁹⁰ 35	⁹¹ 1	⁹² .__	⁹³	⁹⁴	⁹⁵
03	⁸⁷ 3	Planted	⁸⁸ 113	⁸⁹ 1	⁹⁰ 30	⁹¹ 1	⁹² .__	⁹³	⁹⁴	⁹⁵
04	⁸⁷ 4	Pesticide	⁸⁸ 91	⁸⁹ 6	⁹⁰ --	⁹¹ --	⁹² .__	⁹³	⁹⁴	⁹⁵
05	⁸⁷ 5	Harvest	⁸⁸ 123	⁸⁹ 1	⁹⁰ 30	⁹¹ 1	⁹² .__	⁹³	⁹⁴	⁹⁵
06	⁸⁷ 6	Grain Cart	⁸⁸ 209	⁸⁹ 4	⁹⁰ 20	⁹¹ 6	⁹² .__	⁹³	⁹⁴	⁹⁵
07	⁸⁷ 7	Semi	⁸⁸ 304	⁸⁹ 6	⁹⁰ --	⁹¹ --	⁹² .__	⁹³	⁹⁴	⁹⁵



1	2	3	4	5	[If Column 5 = code 6, skip columns 6 thru 11]									
LAND FORMING EQUIPMENT	171	Backhoe	HAULING EQUIPMENT	Bale wagon/mover	8	OR	9	10	11					
	172	Disk Border Maker		142						Bale wagon (PTO)	How many acres were covered?	How many total hours were spent on land forming and hauling?	What power source was used?	What was the fuel type of the tractor?
	173	Ditch Closer		143						Bale Wagon (Self-propelled)	EXCLUDE land forming and hauling operations.	[Example: backhoes, disk border maker, ditcher, rear mounted blade, trucks, wagons, forklift etc.]	Tractors 1 <40 HP 2 40-99 HP 3 100-149 HP 4 150-199 HP 5 >=200 HP OR 66 Animal Drawn 77 Pick up ^{1/} 99 Self-Propelled	[Record fuel type only if Column 10 equals 1-5] 1 diesel 2 gasoline 3 LP gas 4 other
	174	Ditcher		144						Bale Loader				
	175	Levee Plow Disk		158						Stack Mover				
	176	Quarter Drain Machine		160						Front End Loader				
	177	Rear Mounted Blade		161						Round Bale Mover				
	178	Corrugator		195						Hay wagon				
		(Furrow Dicer, Dammar Dicer, Dicer)		224						Forklift				
	180	Land Plane Leveler (Water Leveler)		Trailers						194				
181	Laser Planer, Laser Leveler	195	Hay Wagon											
182	Gate Setter	208	Gravity Wagon	Acres	Hours	Code	Code							
183	Bull Dozer	209	Grain Cart with Auger	92	93	94	95							
184	Polypipe roller	210	Grain Cart with Auger (Self-Propelled)	92	93	94	95							
197	Rock Picker	221	Forage Wagon	92	93	94	95							
ENUMERATOR NOTE: For Land Forming Equipment codes 171 – 184, enter Total Hours Operated in column 9.				222	Dump Wagon	92	93	94	95					
				229	Bin Trailer	92	93	94	95					
				228	Other Trailers	92	93	94	95					
				Trucks	301	Single Axle	92	93	94	95				
				302	Tandem Axle	92	93	94	95					
				303	Tri Axle	92	93	94	95					
				304	Semi	92	93	94	95					
				305	Other Trucks	92	93	94	95					
MOWERS and BALERS				ENUMERATOR NOTE: For Hauling Equipment codes above, enter Total Hours Operated in column 9.				92	93	94	95			
141	Amish Harvester					92	93	94	95					
Baler														
145	Motor Mounted													
146	PTO (I am)													



1 L I N E	2 S E Q U E N C E	3 What operation or equipment was used?	4 [Record machine code from Respondent Booklet.]	5 Who was the machine operator? [Enter code from above.]	[If Column 5 = code 6, skip columns 6 thru 11]					
					6 What was the size or swath of the [machine] used?	7 [Record size unit code.] 1 Feet 2 Row 3 Moldboard bottoms Hauling 4 Pounds 5 Bushels 6 Tons	8 How many acres were covered? EXCLUDE land forming and hauling operations.	9 How many total hours were spent on land forming and hauling? [Example: backhoes, disk border maker, ditcher, rear mounted blade, trucks, wagons, forklift etc.]	10 What power source was used? Tractors 1 <40 HP 2 40-99 HP 3 100-149 HP 4 150-199 HP 5 >=200 HP OR 66 Animal Drawn 77 Pick up ^{1/} 99 Self-Propelled	11 What was the fuel type of the tractor? [Record fuel type only if Column 10 equals 1-5] 1 diesel 2 gasoline 3 LP gas 4 other
No.	No.		Code	Code		Code	Acres	Hours	Code	Code
01	⁸⁷ 1	Pesticide	⁸⁸ 92	⁸⁹ 4	⁹⁰ 120	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴	⁹⁵
02	⁸⁷ 2	Fertilized	⁸⁸ 72	⁸⁹ 4	⁹⁰ 35	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴	⁹⁵
03	⁸⁷ 3	Planted	⁸⁸ 113	⁸⁹ 1	⁹⁰ 30	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴	⁹⁵
04	⁸⁷ 4	Pesticide	⁸⁸ 91	⁸⁹ 6	⁹⁰ --	⁹¹ --	⁹² --. <u> </u>	⁹³	⁹⁴	⁹⁵
05	⁸⁷ 5	Harvest	⁸⁸ 123	⁸⁹ 1	⁹⁰ 30	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴	⁹⁵
06	⁸⁷ 6	Grain Cart	⁸⁸ 209	⁸⁹ 4	⁹⁰ 20	⁹¹ 6	⁹² --. <u> </u>	⁹³ 11	⁹⁴	⁹⁵
07	⁸⁷ 7	Semi	⁸⁸ 304	⁸⁹ 6	⁹⁰ --	⁹¹ --	⁹² --. <u> </u>	⁹³	⁹⁴	⁹⁵



1 L I N E	2 S E Q U E N C E	3 What operation or equipment was used?	4 [Record machine code from Respondent Booklet.]	5 Who was the machine operator? [Enter code from above.]	[If Column 5 = code 6, skip columns 6 thru 11]					
					6 What was the size or swath of the [machine] used?	7 [Record size unit code.] 1 Feet 2 Row 3 Moldboard bottoms Hauling 4 Pounds 5 Bushels 6 Tons	8 How many acres were covered? EXCLUDE land forming and hauling operations.	9 How many total hours were spent on land forming and hauling? [Example: backhoes, disk border maker, ditcher, rear mounted blade, trucks, wagons, forklift etc.]	10 What power source was used? Tractors 1 <40 HP 2 40-99 HP 3 100-149 HP 4 150-199 HP 5 >=200 HP OR 66 Animal Drawn 77 Pick up ^{1/} 99 Self-Propelled	11 What was the fuel type of the tractor? [Record fuel type only if Column 10 equals 1-5] 1 diesel 2 gasoline 3 LP gas 4 other
No.	No.		Code	Code		Code	Acres	Hours	Code	Code
01	⁸⁷ 1	Pesticide	⁸⁸ 92	⁸⁹ 4	⁹⁰ 120	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 3	⁹⁵ 1
02	⁸⁷ 2	Fertilized	⁸⁸ 72	⁸⁹ 4	⁹⁰ 35	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 3	⁹⁵ 1
03	⁸⁷ 3	Planted	⁸⁸ 113	⁸⁹ 1	⁹⁰ 30	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 4	⁹⁵ 1
04	⁸⁷ 4	Pesticide	⁸⁸ 91	⁸⁹ 6	⁹⁰ --	⁹¹ --	⁹² --. <u> </u>	⁹³	⁹⁴ --	⁹⁵ --
05	⁸⁷ 5	Harvest	⁸⁸ 123	⁸⁹ 1	⁹⁰ 30	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 99	⁹⁵ --
06	⁸⁷ 6	Grain Cart	⁸⁸ 209	⁸⁹ 4	⁹⁰ 20	⁹¹ 6	⁹² --. <u> </u>	⁹³ 11	⁹⁴ 5	⁹⁵ 1
07	⁸⁷ 7	Semi	⁸⁸ 304	⁸⁹ 6	⁹⁰ --	⁹¹ --	⁹² --. <u> </u>	⁹³	⁹⁴ --	⁹⁵ --



1	2	3	4	5	[If Column 5 = code 6, skip columns 6 thru 11]					
L I N E	S E Q U E N C E	What operation or equipment was used?	[Record machine code from Respondent Booklet.]	Who was the machine operator? [Enter code from above.]	6 What was the size or swath of the [machine] used?	7 [Record size unit code.] 1 Feet 2 Row 3 Moldboard bottoms Hauling 4 Pounds 5 Bushels 6 Tons	8 How many acres were covered? EXCLUDE land forming and hauling operations.	OR 9 How many total hours were spent on land forming and hauling? [Example: backhoes, disk border maker, ditcher, rear mounted blade, trucks, wagons, forklift etc.]	10 What power source was used? Tractors 1 <40 HP 2 40-99 HP 3 100-149 HP 4 150-199 HP 5 >=200 HP OR 66 Animal Drawn 77 Pick up ^{1/} 99 Self-Propelled	11 What was the fuel type of the tractor? [Record fuel type only if Column 10 equals 1-5] 1 diesel 2 gasoline 3 LP gas 4 other
No.	No.		Code	Code		Code	Acres	Hours	Code	Code
01	87 1	Tractor	88	89 4	90	91 1	92 .	93	94 5	95 1
02	87 1	Spray Pest	88 92	89 4	90 60	91 1	92 160.0	93	94 5	95 1
03	87 2	Spray Pest	88 93	89 4	90 60	91 1	92 160.0	93	94 99	95
04	87		88	89	90	91	92 .	93	94	95
05	87		88	89	90	91	92 .	93	94	95
06	87		88	89	90	91	92 .	93	94	95
07	87		88	89	90	91	92 .	93	94	95

CHEMICAL APPLICATIONS

- 91 Aerial (Airplane)
- 92 Attachment to implement
- 93 Largest Self propelled
(or Large Truck)
- 94 Motorcycle/atv Sprayer
- 95 Small Self-propelled
(Spray-coupe, Hi-cycle)
- 96 Small Truck (Skid Mounted)
- 97 Tractor Mounted
- 98 Trailer Mounted



United States Department of Agriculture
National Agricultural Statistics Service



1 L I N E	2 S E Q U E N C E	3 What operation or equipment was used?	4 [Record machine code from Respondent Booklet.]	5 Who was the machine operator? [Enter code from above.]	[If Column 5 = code 6, skip columns 6 thru 11]					
					6 What was the size or swath of the [machine] used?	7 [Record size unit code.] 1 Feet 2 Row 3 Moldboard bottoms Hauling 4 Pounds 5 Bushels 6 Tons	8 How many acres were covered? EXCLUDE land forming and hauling operations.	9 How many total hours were spent on land forming and hauling? [Example: backhoes, disk border maker, ditcher, rear mounted blade, trucks, wagons, forklift etc.]	10 What power source was used? Tractors 1 <40 HP 2 40-99 HP 3 100-149 HP 4 150-199 HP 5 >=200 HP OR 66 Animal Drawn 77 Pick up ^{1/} 99 Self-Propelled	11 What was the fuel type of the tractor? [Record fuel type only if Column 10 equals 1-5] 1 diesel 2 gasoline 3 LP gas 4 other
No.	No.		Code	Code		Code	Acres	Hours	Code	Code
01	⁸⁷ 1	Sprayed P	⁸⁸ 92	⁸⁹ 4	⁹⁰ 120	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 3	⁹⁵ 1
02	⁸⁷ 2	Disc Plow	⁸⁸ 4	⁸⁹ 4	⁹⁰ 120	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 3	⁹⁵ 1
03	⁸⁷ 3	Planted	⁸⁸ 115	⁸⁹ 1	⁹⁰ 30	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 4	⁹⁵ 1
04	⁸⁷ 3	Fertilized	⁸⁸ 78	⁸⁹ 1	⁹⁰ 30	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 4	⁹⁵ 1
05	⁸⁷		⁸⁸	⁸⁹	⁹⁰	⁹¹	⁹² . <u> </u>	⁹³	⁹⁴	⁹⁵
06	⁸⁷		⁸⁸	⁸⁹	⁹⁰	⁹¹	⁹² . <u> </u>	⁹³	⁹⁴	⁹⁵
07	⁸⁷		⁸⁸	⁸⁹	⁹⁰	⁹¹	⁹² . <u> </u>	⁹³	⁹⁴	⁹⁵

Example: Planting and Fertilizing are done in Tandem



United States Department of Agriculture
National Agricultural Statistics Service



1 L I N E	2 S E Q U E N C E	3 What operation or equipment was used?	4 [Record machine code from Respondent Booklet.]	5 Who was the machine operator? [Enter code from above.]	[If Column 5 = code 6, skip columns 6 thru 11]					
					6 What was the size or swath of the [machine] used?	7 [Record size unit code.] 1 Feet 2 Row 3 Moldboard bottoms Hauling 4 Pounds 5 Bushels 6 Tons	8 How many acres were covered? EXCLUDE land forming and hauling operations.	9 How many total hours were spent on land forming and hauling? [Example: backhoes, disk border maker, ditcher, rear mounted blade, trucks, wagons, forklift etc.]	10 What power source was used? Tractors 1 <40 HP 2 40-99 HP 3 100-149 HP 4 150-199 HP 5 >=200 HP OR 66 Animal Drawn 77 Pick up ^{1/} 99 Self-Propelled	11 What was the fuel type of the tractor? [Record fuel type only if Column 10 equals 1-5] 1 diesel 2 gasoline 3 LP gas 4 other
No.	No.		Code	Code		Code	Acres	Hours	Code	Code
01	⁸⁷ 1	Sprayed P	⁸⁸ 92	⁸⁹ 4	⁹⁰ 120	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 3	⁹⁵ 1
02	⁸⁷ 2	Disc Plow	⁸⁸ 4	⁸⁹ 4	⁹⁰ 120	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 3	⁹⁵ 1
03	⁸⁷ 3	Planted	⁸⁸ 115	⁸⁹ 1	⁹⁰ 30	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 4	⁹⁵ 1
04	⁸⁷ 3	Fertilized	⁸⁸ 78	⁸⁹ 1	⁹⁰ 30	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 4	⁹⁵ 1
05	⁸⁷ 4	Harvest	⁸⁸ 123	⁸⁹ 1	⁹⁰ 30	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 99	⁹⁵
06	⁸⁷ 4	Grain Cart	⁸⁸ 209	⁸⁹ 1	⁹⁰ 20	⁹¹ 6	⁹² . <u> </u>	⁹³ 11	⁹⁴ 99	⁹⁵
07	⁸⁷		⁸⁸	⁸⁹	⁹⁰	⁹¹	⁹² . <u> </u>	⁹³	⁹⁴	⁹⁵

Example: Grain Cart attached to Combine Harvester in Tandem

1 L I N E	2 S E Q U E N C E	3 What operation or equipment was used?	4 [Record machine code from Respondent Booklet.]	5 Who was the machine operator? [Enter code from above.]	[If Column 5 = code 6, skip columns 6 thru 11]					
					6 What was the size or swath of the [machine] used?	7 [Record size unit code.] 1 Feet 2 Row 3 Moldboard bottoms Hauling 4 Pounds 5 Bushels 6 Tons	8 How many acres were covered? EXCLUDE land forming and hauling operations.	9 How many total hours were spent on land forming and hauling? [Example: backhoes, disk border maker, ditcher, rear mounted blade, trucks, wagons, forklift etc.]	10 What power source was used? Tractors 1 <40 HP 2 40-99 HP 3 100-149 HP 4 150-199 HP 5 >=200 HP OR 66 Animal Drawn 77 Pick up ^{1/} 99 Self-Propelled	11 What was the fuel type of the tractor? [Record fuel type only if Column 10 equals 1-5] 1 diesel 2 gasoline 3 LP gas 4 other
No.	No.		Code	Code		Code	Acres	Hours	Code	Code
01	⁸⁷ 1	Sprayed P	⁸⁸ 92	⁸⁹ 4	⁹⁰ 120	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 3	⁹⁵ 1
02	⁸⁷ 2	Disc Plow	⁸⁸ 4	⁸⁹ 4	⁹⁰ 120	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 3	⁹⁵ 1
03	⁸⁷ 3	Planted	⁸⁸ 115	⁸⁹ 1	⁹⁰ 30	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 4	⁹⁵ 1
04	⁸⁷ 3	Fertilized	⁸⁸ 78	⁸⁹ 1	⁹⁰ 30	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 4	⁹⁵ 1
05	⁸⁷ 4	Harvest	⁸⁸ 123	⁸⁹ 1	⁹⁰ 30	⁹¹ 1	⁹² 160. <u>0</u>	⁹³	⁹⁴ 99	⁹⁵
06	⁸⁷ 5	Grain Cart	⁸⁸ 209	⁸⁹ 4	⁹⁰ 20	⁹¹ 6	⁹² . <u> </u>	⁹³ 11	⁹⁴ 5	⁹⁵ 1
07	⁸⁷ 6	Semi	⁸⁸ 304	⁸⁹ 4	⁹⁰ 35	⁹¹ 6	⁹² . <u> </u>	⁹³ 2	⁹⁴ 99	⁹⁵

Example: Grain Cart is simultaneous to Combine, but NOT in tandem.



1 L I N E	2 S E Q U E N C E	3 What operation or equipment was used?	4 [Record machine code from Respondent Booklet.]	5 Who was the machine operator? [Enter code from above.]	[If Column 5 = code 6, skip columns 6 thru 11]					
					6 What was the size or swath of the [machine] used?	7 [Record size unit code.] 1 Feet 2 Row 3 Moldboard bottoms Hauling 4 Pounds 5 Bushels 6 Tons	8 How many acres were covered? EXCLUDE land forming and hauling operations.	9 How many total hours were spent on land forming and hauling? [Example: backhoes, disk border maker, ditcher, rear mounted blade, trucks, wagons, forklift etc.]	10 What power source was used? Tractors 1 <40 HP 2 40-99 HP 3 100-149 HP 4 150-199 HP 5 >=200 HP OR 66 Animal Drawn 77 Pick up ^{1/} 99 Self-Propelled	11 What was the fuel type of the tractor? [Record fuel type only if Column 10 equals 1-5] 1 diesel 2 gasoline 3 LP gas 4 other
No.	No.		Code	Code		Code	Acres	Hours	Code	Code
01	87 1	Planted	88 115	89 4	90 16	91 2	92 300. <u>0</u>	93	94 3	95 1
02	87 2	Planted	88 115	89 4	90 16	91 2	92 300. <u>0</u>	93	94 3	95 1
03	87		88	89	90	91	92 .	93	94	95
04	87		88	89	90	91	92 .	93	94	95
05	87		88	89	90	91	92 .	93	94	95
06	87		88	89	90	91	92 .	93	94	95
07	87		88	89	90	91	92 .	93	94	95

Example: Two planters each simultaneously planted half of a 600 acre field.



1 L I N E No.	2 S E Q U E N C E No.	3 What operation or equipment was used?	4 [Record machine code from Respondent Booklet.] Code	5 Who was the machine operator? [Enter code from above.] Code	[If Column 5 = code 6, skip columns 6 thru 11]					
					6 What was the size or swath of the [machine] used? Code	7 [Record size unit code.] 1 Feet 2 Row 3 Moldboard bottoms Hauling 4 Pounds 5 Bales Code	8 How many acres were covered? [EXCLUDE land forming and hauling operations.] Acres	9 How many total hours were spent on land forming and hauling? [Example: backhoes, disk border maker, ditcher, rear mounted blade, trucks, wagons, forklift etc.] Hours	10 What power source was used? Tractors 1 <40 HP 2 40-99 HP 3 100-149 HP 4 150-199 HP 5 >=200 HP OR 66 Animal Drawn 77 Pick up" 99 Self-Propelled Code	11 What was the fuel type of the tractor? [Record fuel type only if Power code equals 1-5] 1 diesel 2 gasoline 3 LP gas 4 other Code
01	871	Fert Buggy	88 77	89 4	90 4000	91 4	92 13.0	93	94 5	95 1
02	872	Chem Highboy	88 93	89 4	90 90	91 1	92 13.0	93	94 99	95
03	873	DISK	88 61	89 4	90 12	91 2	92 13.0	93	94 5	95 1
04	874	Planter	88 111	89 5	90 12	91 2	92 13.0	93	94 5	95 1
05	875	Highboy	88 93	89 4	90 90	91 1	92 13.0	93	94 99	95
06	876	Cultivator	88 22	89 5	90 12	91 2	92 13.0	93	94 5	95 1
07	877	Highboy	88 93	89 4	90 90	91 1	92 13.0	93	94 99	95
08	878	Polypipe	88 184	89 4	90 4	91 1	92 .	93 3	94 5	95 1
09	879	Highboy	88 93	89 4	90 90	91 1	92 13.0	93	94 99	95
10	870	Highboy	88 93	89 4	90 90	91 1	92 13.0	93	94 99	95
11	871	Picker	88 215	89 1	90 8	91 2	92 13.0	93	94 99	95
12	872	Round Bale man	88 161	89 4	90 1	91 5	92 .	93 3	94 5	95 1
13	873	Truck	88 304	89 6	90	91	92 .	93	94	95
14	874	Stalk cutter	88 211	89 4	90 12	91 2	92 13.0	93	94 5	95 1

Cotton Example

BEDDERS–SHAPERS

- 41 Bedder (Shaper) (Bedshaper, Crowder)
- Disk**
- 43 Hipper
- 44 Row
- 45 Float
- 46 Lister (Middle–buster)
- 47 Rorovator–bedder

HARVESTING EQUIPMENT

- 211 Chopper (Stalk Cutter)
- 213 Gleaner
- Picker**
- 214 Mounted
- 215 Self–propelled
- 216 Rood Machine
- Striper**
- 217 Mounted
- 218 Pull Type
- 219 Self–propelled

MISCELLANEOUS TILLAGE

- 61 Land–all, Do–all, Mix–n–till, Till–all
(Disk, Shovels, Reel & Spikes)
- 62 Mulch Treader, Picker, Treader, Skew
- 63 Roto–tiller
- 64 Roterra (Roto–spike, Lely)
- 65 Sand–fighter
- 66 Soil Finisher (Finishing Tool, Mulch
Finisher, Tri–tiller, Task Master)
- 67 Root Crown Puller
- 68 Stalk Puller/Chopper
- 69 Vertical Tiller (Turbomas)
- 70 Strip Tiller

MODULE BUILDING and HAULING EQUIPMENT

- 212 Module Builder
- 220 Trailer
- 221 Boll Buggy

LAND FORMING EQUIPMENT

- 171 Backhoe
- 172 Disk Border Maker
- 173 Ditch Closer
- 174 Ditcher
- 175 Levee Plow Disk
- 177 Rear Mounted Blade
- 178 Corrugator (Furrow Dicer, Dammar
Dicer, Dicer)
- 180 Land Plane Leveler (Water Leveler)
- 181 Laser Planer, Laser Leveler
- 182 Gate Setter
- 183 Bull Dozer
- 197 Rock Picker

****IN THE OVERSIGHT DOCUMENT****

184 Poly Pipe Roller Plow



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Quiz Break

In the Field Operations Table, when should you “skip” a sequence number (i.e. go 1, 2, 4)

- A) Never
- B) When recording a tandem hookup
- C) When you skip a line to leave space
- D) Whenever you have to write an unlucky number



New Machinery, Labor, Services, Technologies

- Purchase of brand-new machinery
- Hours spent on various activities
- Wages
- Custom work expense
- Technical or consultant services
- Data collection technologies



[Enumerator Action: Were machine or equipment codes reported in item 1?]

4029 1 ☐ Yes – Continue

3 ☐ No – Go to item 3

2. Were any of the machines or equipment reported in Columns 3 or 4 of item 1 purchased new during 20 xx

Yes = 1
No = 3

Code
4030

[If item 2 = 1, continue. Otherwise go to item 3.]

1	2	3
Machine purchased new in 20 xx	[Record machine code from respondent booklet.]	Dealer's list price of the machine. (This should be the "sticker price," not including discounts or trade-in values for used machinery.)
	Code	Dollars
4031	4032	4033
4034	4035	4036
4037	4038	4039
4040	4041	4042
4043	4044	4045



3. Now I need some additional information about your labor.
 Please report the paid and unpaid labor that worked on the selected field to produce the 20XX target crop.
 EXCLUDE labor that was reported for field work performed by machines.

Type of Workers	How many hours did (type of worker) spend on the selected field—		
	1	2	3
	scouting for weeds, insects and diseases? Hours	irrigating? Hours	performing other work by hand? Hours
You (the operator)	1101	1102	1103
Partner(s)	1104	1105	1106
Unpaid workers	1107	1108	1109
Paid part-time or seasonal workers EXCLUDE custom and contract labor	1110	1111	1112
Paid full-time workers EXCLUDE custom and contract labor	1113	1114	1115



4. What was the average hourly wage rate paid to part-time or seasonal hired workers on the selected field? Part-time workers are defined as those who worked for wages or salaries for less than 30 hours a week on average. EXCLUDE custom and contract workers, payroll taxes and benefits.....

Dollars & Cents
Per Hour

1119

OR

Total Dollars per
Week

2119

AND

Number of Hours
Worked Each Week

3119

5. What was the average hourly wage rate paid to full-time hired workers on the selected field? EXCLUDE custom and contract workers, payroll taxes and benefits.....

Dollars & Cents
Per Hour

1118

OR

Total Dollars per
Week

2118

AND

Number of Hours
Worked Each Week

3118

6. Was any contract labor used on the selected field?.....

Code

Yes=1
No=3

1116

[If item 6 = 1, ask—]

a. What was the average cost per acre for this contract labor? INCLUDE operator, landlord, and contractor costs.....

Dollars & Cents
Per Acre

1117

7. What percent of the total number of unpaid hours worked on the selected field was performed by workers under 16 years of age? Estimates of labor costs for unpaid workers are based on off-farm wage rates, which are different for workers under 16 relative to those 16 and older.....

Percent

1120



8. Now I need some information on how much was spent or will be spent for custom services used on the selected field for the XX target crop.

1 Custom Service Which of the following services were performed for the XX target crop on the selected field? [Check box for each service performed; refer to item 1 if necessary.]	2 Including operator, landlord, and contractor costs, how much was spent for [column1] on the selected field for the XX target crop? Dollars & Cents per Acre
☐ a. Custom land preparation, shaping and/or leveling?	1121 • ____
☐ b. Custom cultivating?	1122 • ____
☐ c. Custom planting and/or reseeding?	1123 • ____
☐ d. Custom harvesting?	1124 • ____
☐ e. Custom module building? $\frac{\text{____} \times \text{____}}{\text{(Dollars \& cents per unit x Total units hauled from field + Acres harvested in field)}} = \text{____}$	1125 • ____
☐ f. Custom hauling from field to gin? $\frac{\text{____} \times \text{____}}{\text{(Dollars \& cents per unit x Total units hauled from field + Acres harvested in field)}} = \text{____}$	1126 • ____
[If custom harvesting, module building, and hauling from field to gin cannot be separated, ask—]	
☐ g. Custom harvesting, module building, and hauling from field to gin? $\frac{\text{____} \times \text{____}}{\text{(Dollars \& cents per unit x Total units hauled from field + Acres harvested in field)}} = \text{____}$	2127 • ____



9. Was the crop harvested and hauled from the selected field dried (or will be dried) before it was sold or stored?.....

Code	
Yes=1	2748
No=3	

10. Did you hire or receive any technical or consultant services to make recommendations such as for nutrient, pest control, irrigation, or precision farming for the selected field?.....

Yes=1	1196
No=3	

[If item 10 = 1, continue. Otherwise, go to item 14.]

11. Which of the following technical or consultant services did you obtain to make recommendations for the selected field?

a. Nutrient recommendations/management service?.....

Code	
Yes=1	1129
No=3	

b. Soil or tissue sample collection?.....

Yes=1	1130
No=3	

c. Pest control recommendations/management service?.....

Yes=1	1131
No=3	

d. Pest scouting?.....

Yes=1	1132
No=3	

e. Irrigation management service (i.e. irrigation scheduling)?.....

Yes=1	1133
No=3	

f. Yield map or remote sensing map development/interpretation?.....

Yes=1	1134
No=3	

g. Other custom or technical service? [Specify: _____].....

Yes=1	1135
No=3	

[If any item in 11a–g = 1, continue. Otherwise go to item 14.]



[If any item in 11a-g = 1, continue. Otherwise, go to item 14.]

12. Were any of the technical or consultant services listed in item 11a-g provided to you at no cost or were partially reimbursed by the Natural Resources Conservation Service?.....

Yes=1
No=3

Code

4046

13. What was the cost for all of these services? INCLUDE operator, landlord, and contractor costs. EXCLUDE cost of soil/tissue tests or scouting cost reported earlier. Do not report costs for any of these services if they were previously reported as part of the cost of materials and/or application.....

Dollars & Cents
per Acre

1136

• _ _

OR

Total Dollars

1137



14. Please report the precision agriculture technologies you used on the selected field in year to produce this crop.

1 Precision Agriculture Tool	2 Was this tool used on the selected field? Yes = 1 No = 3	[If column 2 = code 3, skip columns 3 thru 5]		
		3 Are data from this tool used to create a map? Yes = 1 No = 3	4 What is the replacement cost for this tool? Total Dollars	5 What is the annual fee for using this tool? ^{1/} Total Dollars
a. Yield monitor	2461	2463	2570	2571
b. Soil tests on core sample (performed on-farm or sent out to a laboratory)	2464	2466	2572	2573
c. Soil sensor tests	2467	2469	2574	2575
d. Hard-wired crop condition sensors	2470	2472	2576	2577
e. Wireless crop condition sensors	2473	2475	2578	2579
f. Aircraft or satellites	2445	2447	2448	2449
g. Drones or Unmanned Aerial Vehicles (UAV)	2456	2457	2458	2459
h. Unmanned crop robots (e.g., Greenfield Botony™)	5608	5609	5610	5611
i. Targeted herbicide sprayers (e.g., John Deere See & Spray™)	5612	5613	5614	5615

^{1/} INCLUDE custom service fees, data subscriptions, and online tool subscriptions.

[If item 14a column 2 = 1, continue; otherwise, go to item 16.]



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15. Did you use the yield monitor information to--

- a. add/improve tile drainage?.....
- b. negotiate new crop leases?.....
- c. help determine chemical input use?.....

	Code
Yes=1	1141
No=3	
Yes=1	1144
No=3	
Yes=1	1143
No=3	

[If any of item 14 column 2 = 1, continue; otherwise, go to item 19.]

16. Using data collected from the previous tools table in item 14, did you obtain crop management recommendations, such as data interpretation, in 2026 for the selected field?.....

	Code
Yes=1	5616
No=3	

[If item 16 = 1, continue; otherwise, go to item 17.]

- a. What was the cost for these services? INCLUDE operator, landlord and contractor costs. EXCLUDE costs for any of this equipment if it was previously reported as part of the costs of materials and/or application.....

Dollars & Cents per Acre		Total Dollars
3150	OR	3151



17. In the selected field, did you use the UAV for any of the following purposes?

		Code
a. Weed analysis?.....	Yes=1 No=3	3161
b. Yield analysis?.....	Yes=1 No=3	3165
c. Moisture analysis?.....	Yes=1 No=3	3166

18. Was any of the following GPS-enabled (Global Positioning System) equipment used to produce cotton on the selected field in 20xx?

		Code
a. Mounted in-cab heads-up displays?.....	Yes=1 No=3	2155
b. Smart phones or computer tablets?.....	Yes=1 No=3	2156
c. Automatic section control, such as auto sprayer boom controls or automatic section shut offs?.....	Yes=1 No=3	2165

19. If any GPS-enabled equipment was used, what was the cost to purchase and install all GPS-enabled equipment, not including guidance auto steering equipment? INCLUDE cost for GPS receiver and annual GPS subscription fee, and operator, landlord, and contractor costs. EXCLUDE costs for any of this equipment if they were previously reported as part of the costs of materials and/or application.....

Dollars & Cents per Acre	OR	Total Dollars
2166 •__		2167



21. Were any automated guidance systems (e.g. auto steer), excluding Light Bar, used on the selected field?.....

Yes=1
No=3

Code

2148

[If item 21 = 1, continue; otherwise, go to item 22.]

a. Was the automated guidance system.....

1 New, owned?
2 Used, owned?
3 Leased?

Code

2158

b. What year was the automated guidance system first purchased?.....

Year

2159

c. What is the replacement cost for the automated guidance system?.....

Dollars & Cents
per Acre

2160

•__

OR

Total Dollars

2161

d. What is the annual fee for the automated guidance system?.....

2162

•__

OR

2163

e. Was a fully autonomous tractor (e.g., John Deere 8R/9R model) used on the selected field?.....

Yes=1
No=3

Code

5623



Code

22. Was a variable rate applicator used on the selected field?.....
 [If item 22 = 1 continue; otherwise, go to item 23.]
 Please report the variable rate applicator types you used on the selected field to produce the Crop in year. If a particular row's variable rate applicator was not used, leave that row blank.

Yes=1 2164
 No=3

1	2	3	4	5
Was a variable rate applicator used on the selected field for--	Tool Used	Was this applicator-- 1 New, owned 2 Used, owned 3 Leased	What year was the applicator first used?	What was the premium paid for the applicator?
	Yes=1 No=3	Code	Year	Total Dollars
a. seeding.....	1158	2171	2172	2173
b. fertilizer/lime applications.....	1152	2175	2176	2177
c. pesticide applications.....	1159	2179	2180	2181
d. irrigation applications.....	1197	2183	2184	2185



Closing Remarks



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Section G: Irrigation



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General Reminders

- For the SELECTED FIELD only
- Irrigation System Type Codes located in respondent booklet
- [Follow skip instructions]



Pressure Systems



Gravity Systems



System Selection

Acres

1160

1. How many acres in the selected field were irrigated for the 20XX target crop?.....

[If none, go to Conclusion.]

2. Now I have some questions about the irrigation system and water used on the selected field for the 20XX target crop.

a. What type of irrigation system was used to irrigate the selected field?
[Show System Type Codes in the Respondent Booklet. Enter System Type Code for system that applied the most water.].....

b. What was the total quantity of water applied to the selected field during the entire growing season? INCLUDE all water used from both on-farm and off-farm sources and applied by any irrigation system.....

Unit	System
System Type Code	1161
Inches per Acre OR Total Acre Feet	1162
	1163



Irrigation Water Application

- b. What was the total quantity of water applied to the selected field during the entire growing season? INCLUDE all water used from both on-farm and off-farm sources and applied by any irrigation system.....

Inches per Acre	1162
OR	
Total Acre Feet	1163

[If operator cannot provide item 2b, ask (i) and (ii), otherwise go to 2c.]

- i. What is the total number of hours this system was used to apply water to the selected field during the ____ growing season?.....
- ii. How many gallons per minute were applied?.....

Total Hours	1164
Gallons per Minute	1165



Water Source and Pump Specifics

c. What percent of the water used to irrigate the selected field through this system came from surface water sources?.....

Percent

1166

d. What was the number of times the selected field was irrigated during the ____ growing season using this system? INCLUDE any pre-plant irrigation.....

Number of
Irrigations

1167

e. What was the pump type?
[If more than one pump in the
system, enter type for pump
closest to water source.].....

1 Turbine
2 Submersible
3 Centrifugal
4 Booster
5 Siphon
99 No Pump

[If code 99, go to item j.].....

Code

1168

f. What was the average pumping rate?.....

Gallons per Minute

1169



Pressure System & Pump Details

[If item 2a = code 1–9 (Pressure System), ask—]

g. What was the system operating pressure?.....

Pounds per Square Inch	1170
------------------------	------

h. What was the primary motor type used to pump the water?.....

- 1 Diesel
2 Gasoline
3 LP Gas
4 Natural Gas
5 Electricity
6 Solar Power

.....

Code	1171
------	------

i. What was the average motor size?.....

Horsepower	1172
------------	------



Gravity System Details

- e. What was the pump type?
[If more than one pump in the
system, enter type for pump
closest to water source.].....

1 Turbine
2 Submersible
3 Centrifugal
4 Booster
5 Siphon
99 No Pump

[If code 99, go to item j.].....

Code	1168
	99

[If No Pump was used, item 2e = 99, ask--]

- j. What was the average flow rate?.....
- k. How many other acres on this operation were irrigated using the selected field's
irrigation system during the 20xx growing season? EXCLUDE the selected field.....

Gallons per Minute	1173
Acres	1174 ■



Cost of Irrigation

	Dollars & Cents per Acre	OR	Total Dollars
3. What was the cost of the fuel or electricity used to irrigate the selected field? INCLUDE operator, landlord, and contractor costs.....	1189 _____		1190 _____
			Code
4. Was any water purchased to irrigate the selected field? INCLUDE landlord's share and purchases from all sources.....		Yes=1 No=3	1191 _____
[If item 4 = 1 ask-- Otherwise go to item 5.]			
	Dollars & Cents per Acre	OR	Total Dollars
a. What was the total cost for the water purchased for the selected field during the 20xx growing season? INCLUDE operator, landlord, and contractor costs and ditch maintenance costs for the selected field.....	1193 _____		1194 _____
[If siphon tubes were used, item 2a = 10 or 11, ask--]			
			Total Dollars
5. What would be the total cost to replace all the siphon tubes used on the selected field?.....			1201 _____
[If poly pipe system was used, item 2a = 14, ask--]			
			Total Dollars
6. What was the total amount spent for poly pipe used on the selected field during the 20xx growing season? INCLUDE operator, landlord, and contractor costs.....			1202 _____



Gated Pipe

[If gated pipe system was used, item 2a = 15 or 16, ask--]

7. What was the average diameter of gated pipe used to irrigate the selected field?.....

Inches

1203

Feet

a. What was the total length of gated pipe used?.....

1204



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Irrigation Wells

[If Pipe systems were used, item 2a 10, 11, 14, 15 or 16, ask--]

8. Were wells used to supply irrigation water for the selected field?.....

Yes=1
No=3

Code

1205

[If item 8 = 1 continue. Otherwise go to item 9.]

a. How many wells were used to irrigate the selected field?.....

Number

1206

b. What was the average diameter of the outer well casing?.....

Inches

1207

c. What was the average pumping depth of these wells during the irrigation season? Pumping depth is the depth to water at the start of the irrigation season, plus an average decline in the water level caused by pumping during the irrigation season.....

Feet

1208

d. Were other fields irrigated using water pumped from wells that supplied water to the selected field?.....

Yes=1
No=3

Code

1210

[If item 8d = 1 continue. Otherwise go to item 9.]

e. Excluding the selected field, how many other acres on this operation were irrigated using the same wells during the 20xx growing season?.....

Acres

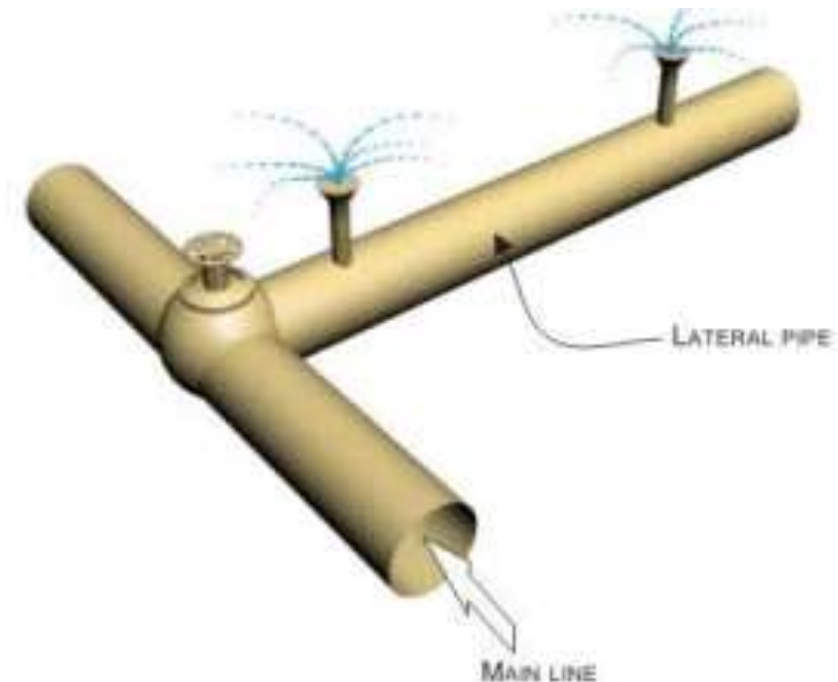
1211



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Lateral Pipe Use



9. Was any additional mainline or lateral pipe used to carry water from the source to the system in the same wells during the 20xx growing season?.....

Yes=1
No=3

Code

2211

[If item 9 = 1 continue. Otherwise go to Conclusion.]

Inches

1212

a. What was the average diameter in inches of the most common type of this additional pipe used?....

Feet

1213

b. How many feet of this additional pipe were used to bring water to the selected field?.....



Enumerator Quiz Question

1. How many acres in the selected field were irrigated for the 2025 cotton crop?.....

	Acres
1160	50.0

[If none, go to Conclusion.]

2. Now I have some questions about the irrigation system and water used on the selected field for the 2025 cotton crop.

	Unit	System
a. What type of irrigation system was used to irrigate the selected field? [Show System Type Codes in the Respondent Booklet. Enter System Type Code for system that applied the most water.].....	System Type Code	1161 5
b. What was the total quantity of water applied to the selected field during the entire growing season? INCLUDE all water used from both on–farm and off–farm sources and applied by any irrigation system.....	Inches per Acre OR Total Acre Feet	1162 2 1163



Closing Remarks

- Review Interviewer's Manual
- Understand skip sequence
- Be familiar with
 - Irrigation system types
 - Irrigation pumps
 - Water sources used in your area

